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JANUARY—1976

Angler

the
Keystone State's
Official
FISHING·BOATING
Magazine...

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Behind The Scene —



This is the issue that contains our Annual Report for the year which ended last June 30th. In effect, an Annual Report is our "brag sheet" where we try to summarize, in relatively short space, some of the accomplishments of a small but complex organization in a fiscal year.

The format of an Annual Report does not permit much in the way of space for extending recognition to those outside the Commission who have had a profound effect upon our successes throughout the year. I would like to use this short space to express our gratitude — with words which will certainly prove inadequate — to those without whom we would not have achieved much success at all . . . if any.

First of all, our boundless thanks to the countless private landowners who have permitted anglers to trespass along the streams running through their properties to enjoy the fine sport of angling. This is almost exclusively an American tradition, and a wonderful one. It is certainly worth a bit of special effort on the part of every angler to make sure that the landowner does not regret his generous sharing.

Certainly we would have to thank the other "landowner" hosts, such as: the Pennsylvania Game Commission, the Department of Environmental Resources, county and local governments, and the federal government since many of our finest fishing streams are on their land.

We would be neglectful if we did not mention our appreciation of the support and coverage given to Commission programs by the news media. Not only do they provide the angler with information on where to go, but how to do what when you get there! And, more importantly, they can be counted on, almost without exception, to join in our fight for clean water — without which we might as well forget the whole thing. The results of their efforts are evidenced in terms of pollution control and the enactment of sound conservation legislation.

To Trout Unlimited, to the Pennsylvania Federation of Sportsmen's Clubs, to Bass Angler Sportsmen's Society, to the Izaak Walton League, to the hundreds of organized sportsmen's clubs, the Scouts, the Explorers, Future Farmers of America, the Youth Conservation Corps . . . to all of those who helped, we are very grateful.

A special thanks belongs to those members of the General Assembly of Pennsylvania who, by enlightened laws, maintain a quality environment that provides not only the opportunities for good fishing and boating, but open space where, in a very hectic world, we can all have the opportunity to renew our souls.

At the beginning of the 200th anniversary of the American Revolution we find our mail flooded with offers for special "mint editions" of Bicentennial souvenirs and other junk items that have nothing to do with the celebration — they're just productions of fast buck artists — it is refreshing to see that there are still so many unselfish and generous people who are, in a way, a counterpart of their forefathers . . . people who did more than sit and talk about it, but got up and did something.

On behalf of the Pennsylvania Fish Commission, a conservation agency, we want to extend our thanks to everyone who in any way, large or small, contributed to the maintenance of conservation ethics in this great Commonwealth.

Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

Published Monthly by the
PENNSYLVANIA FISH COMMISSION
COMMONWEALTH OF PENNSYLVANIA
Milton J. Shapp, Governor

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Volume 45 - No. 1

January, 1976

CONTENTS

Fishing Outlook, by George Dolnack	2
Leaky Boots - Readers' Comments	3
Taking A Closer Look by Tom Fegely	4
Notes From The Streams	5
Ice Fishing Statewide	6
The Annual Report Of The Pennsylvania Fish Commission	Center Section
Fly Fishing by Chauncy K. Lively	26
Fly Fisherman's "Pen" by Loring D. Wilson	28
Building A Battery Caddy by Arthur Glowka	29
"Catch 466" by Alan MacKay	30
Ashore & Afloat by Gene Winters	31
CO-OP News, by Bill Porter	32

Front Cover: Veteran ice fisherman Nick Kuzo, no stranger to Angler readers, attempts to allay the fears of a passing setter while ice fishing on northeastern Pennsylvania's Lake Wallenpaupack.
Photo by Tom Fegely

Back Cover: The interpretive artistry of staffer Tom Duran comes to the fore in two new full color snake and turtle wall charts produced by our Office of Information's Special Publication Section. They're great for den, club or classrooms.

James F. Yoder, Editor

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Adam Bernoski piles up perch while wife, Rosemary, and son, John, look on.

fishing outlook

by george e. dolnack, jr.

Most lakes across our northern tier now have safe ice and many of those in our southern region are well on their way to a solid covering too.

As the word goes out (and it gets

spread around fast!) "hard water" anglers will besiege their favorite ice bound haunts. While they reign supreme over the winter's fishing activities, the weather intimidates the less hardy outdoorsmen into staying at home during our interlude of testy cold.

First ice is eagerly looked forward to by all ice fishermen. Some of the clan say that the initial weeks of the freeze produce the best catches of the season. Others claim that the fish really don't start hitting until a blanket of snow along with thicker ice and cloudy days reduce the intensity of the light penetrating into the water.

For example, early season bluegill and crappie ice fishermen might head

for spots like Tamarack Lake and Conneaut Lake in Crawford County or Shenango Reservoir in Mercer County.

Winter trout enthusiasts favor such places like Ridgeway Reservoir in Elk County, Stevenson Dam in Cameron County, Parker Lake in Clearfield County, Kettle Creek Dam in Tioga County, Scotts Run in Berks County and a host of others scattered about the state.

In a couple of weeks, some real hectic perch fishing will be taking place on Lake Erie's Presque Isle Bay where panfish, coho salmon, northern pike, largemouth bass and smelt will also tighten the lines of ice fishermen. What a Ball is available there!

Action on our southern county lakes should pick up in the next couple of weeks ahead as the ice thickens.

Each lake has its own peculiarities and the best way to learn them is to get out on the ice. Don't let winter keep you indoors because a lot of excellent fishing goes begging during the freeze-up. With the wide selection of cold weather clothing available, it needn't be so because anyone hitting the frozen expanse these days can do so in total comfort.

For many folks, ice fishing is a family affair. Besides the fishing, there's also the prospect of a mid-winter cookout. It's hard to beat a hamburger that's been sizzled right over the spot you cast to . . . or perhaps fished from a boat during more moderate weather. Add to that a cup of freshly brewed coffee and you've got fare fit for any king of the ice.

The lakes and the fish are out there waiting — *for you*. Enjoy them!

Dave Fink, Francis Norkunas, and Tom Stancik . . . a trio of fishermen who like to be comfortable while ice fishing!





ARE YOU A NEW SUBSCRIBER?

If you're one of the many who recently received gift subscriptions to the Angler, welcome aboard! We're happy to have you numbered among our readers and trust that the Angler's pages in the months ahead will hold something of interest to you. January's issue is a bit different from the other eleven you'll receive. In it we normally present our **ANNUAL REPORT**, an accounting of how the Pennsylvania Fish Commission spreads out your fishing and boating dollars over a vast expanse of water-oriented recreation. To include this report we must necessarily shorten some columns and features, and completely omit others. So, sit tight . . . we'll get back to our regular format next month. Happy reading! Ed.

HELPFUL HINT—

While fixing a leaky bathroom in my home, I came across a silicone adhesive that the "Leaky Booted" fisherman may find handy. I have found that this rubber-like glue is excellent (and surpasses patches in my opinion) for repairing holes and tears in fishing boots. It is made by Dow Corning and comes in a tube that costs around \$2.50 and can be obtained at a hobby or craft store. While in the tube, it is in a semi-liquid paste state; and, when it dries it is like pliable rubber. I have also found it to be an excellent replacement for the live rubber tips on hackle pliers when they wear out.

WILLIAM G. HARASTI
Oil City

CLOSE TO HOME—

I've read the August issue of the Angler and liked the article about "The Hidden Stream," by George Dolnack, Jr. I like to fish the Schuylkill because it has a variety of fish. I also like to fish on the East River drive near the twin bridges. Hey, perfect article, George!

J. R. MEDLEY
Philadelphia

WE LISTEN!

In a letter to the Leaky Boots column two years ago I proposed, like some others, that the Commission permit wading in the FISH-FOR-FUN section of Kettle Creek, and also that the trout season be extended annually through the month of October on all state streams.

Kettle Creek was soon thereafter opened to wading and apparently with no adverse effect to the stream or the fish. But, my main reason for writing now is to thank the Commission very much for finally giving the trout fisherman who really enjoys fishing the state's better streams, his chance for the first time in this October, 1975. Streams in our northern tier counties where I like to fish are really at their best during October. Color is breathtaking and the water itself possesses a clearness that is unequalled at any other time of the year. Trout are quite cooperative, also, and enough of a "hatch" remains to make dry fly fishing fun. There is a noticeable lack of summer crowds, heat and bothersome insect pests. Again, thank you for realizing that the period from Labor Day through October can offer a lot of enjoyment in trout fishing.

T. J. THOBURN
Scottsdale

On behalf of the Members of the Commission, your thanks are accepted. Ed.

NOCKAMIXON—COMING UP

I am a new subscriber to the Angler and enjoy it very much. However, I have not read of any success coming from Lake Nockamixon, in Bucks County, which was just opened this year to public fishing and boating. So, I would like to be the first to say that in coming years I think this will be one of the top musky lakes in the state. I have only fished there six times, but have totaled 17 muskies so far. All being under 30-inches, the biggest one 27-inches, I regret to say, naturally! But, really, I think it should provide some very good musky and pickerel fishing in coming years.

JOE SIMKANIN
Trooper

SECRET'S OUT!

In response to your October issue of the Pennsylvania Angler, in particular, the article on Project Brookville, the unidentified fishman on page 17 is my dad, Mr. Lawrence Canon of Franklin, Pa. He often stops at Brookville to "Fish For Fun" on his way to visit DuBois, on his way home or meets my husband there to enjoy an afternoon. This particular picture must have been taken September 14. How do I know? My mother tells me it was

pouring rain and he only had his good raincoat with him, but that didn't deter him from dipping his line!

MRS. EDWARD DAVIS
DuBois

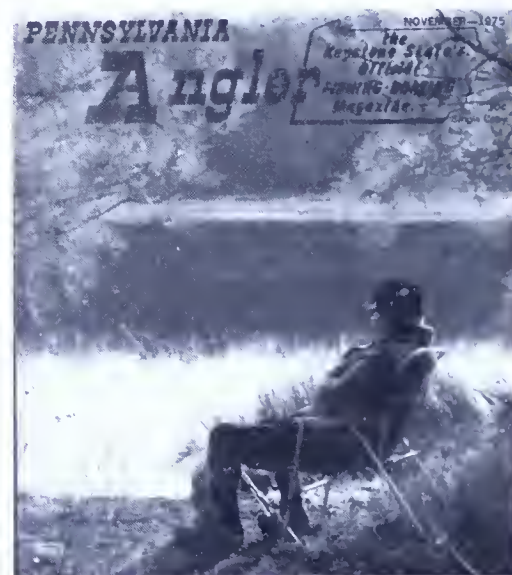
FINE GESTURE

Seasons may come and seasons may go, but a professional with a camera can capture the real life of enjoyment. On the November cover we see a man and his chair, fishing rod, can of worms or bucket of minnows and not a care or worry in this world of trouble. It's one way to get away from the crowds, traffic and pollution . . . to relax and go fishing in our many streams, lakes, or rivers which benefit from the fine management of our Pennsylvania Fish Commission.

If this fine aged fisherman doesn't get the Angler and you know his name and address, please send him a year's subscription, along with the other couple names I have chosen to receive the Angler. They are both Boy Scouts and I'm most certain they and their families will enjoy the Angler as we all do.

My many thanks and Holiday Greetings to you, your family, and our fine Fish Commission.

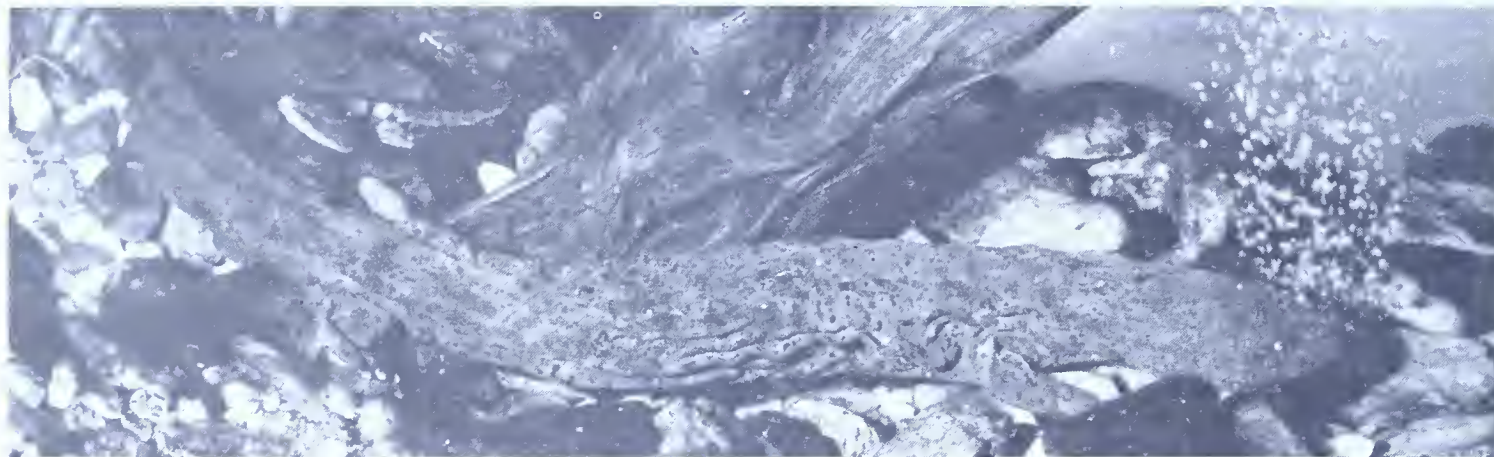
Most sincerely,
BENJ. A. JAMES
"God's Country"
RD 1 Spring Run
Weedville, Pa. 15868



We thank you, Ben, on behalf of the Commission, our photographer, Russ Gettig, and the yet unknown mystery man on our November cover. Russ photographed him while passing by Scotts Run Lake, in Berks County, perhaps unbeknown to our model himself. Now, if any of our readers thinks he knows our cover man, have him get in touch with Waterways Patrolman Ammon Ziegenfus, Shoemakersville, 19555, telephone: 215-562-8815. Once we've positively identified him, he'll begin receiving Ben's gift subscription. Ed.



A Northern Copperhead snake, like that fellow at left, survived for 18 years in captivity and one captive bullfrog like our bulgy-eyed friend, right, made it through 16 years. The not-so-pretty nor popular hellbender, below, is America's largest and longest-lived salamander.



Taking A Closer Look

by Tom Fegely

ANIMALS THAT BUY TIME

Since the average life expectancy of a human being is about 70 years, many of us can look forward to greeting better than 25,000 sunrises. But what if we could "save" some of those for a chance to live part of our existence in the 21st Century? If, for six months of each year, we could drop into a state of suspended animation like a hibernating reptile or amphibian, could we then expect to live for 140 years?

Sound far out? Not necessarily!

Compare, for example, the longevity of birds and mammals as compared to reptiles and amphibians. The latter, by far, outlive the majority of high-strung songbirds, ducks, rabbits, mice, squirrels and the like. At this very moment, however, most warm-blooded creatures are scurrying about the Pennsylvania woods and wa-

terways in search of food and shelter while the cold-blooded critters are hibernating deep in the forest soil or in the mud at the bottom of a pond. Unlike most other creatures, these animals may be actually "buying time." Some of them live to phenomenal ages, even longer than their southern cousins who stay active year-round.

The Methuselah of all cold-blooded land animals is the Eastern Box Turtle (*Terrapene carolina carolina*). The July 1973 issue of the *Angler* carried Ned Smith's account of "Uncle Johnny's Turtle" — a box turtle whose underside bore an inscription carved there in 1908. The record, however, is held by a box turtle that survived in the wild for 138 years. Possibly there are others even older, but the difficulty of keeping accurate records and determining actual ages is obvious.

At the present time most of our knowledge of the actual ages reached by reptiles and amphibians has been gathered from captive specimens. Due to the protection and care offered them, it can be assumed that they stand a better chance of long lives than do the wild animals. Nevertheless, some of the ages to which a few of these cold-blooded creatures have survived in captivity are amazing.

One Wood Turtle (*Clemmys insculpta*) is known to have lived for 58 years, a Musk Turtle (*Sternotherus odoratus*) for 53 years, a Spotted Turtle (*Clemmys guttata*) made it

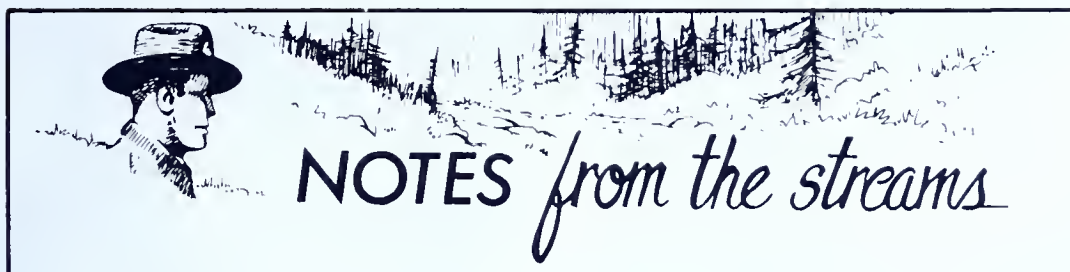
through 42 years, and a Mud Turtle (*Kinosternum subrubrum*) lived 38 years.

In the snake clan, a Northern Copperhead (*Ancistrodon contortrix*) lasted 18 years, a Massasauga (*Sistrurus catenatus*) lived 14 years, and a Black Rat Snake (*Elaphe obsoleta*) 13 years.

Amphibians are neither as hardy nor as well protected as reptiles but even these secretive creatures sometimes reach unbelievable ages. The record holder is an American Toad (*Bufo terrestris*) that enjoyed a captive existence for 31 years. It is followed by a Bullfrog (*Rana catesbiana*) that died after 16 years and a Green Frog (*Rana clamitans*) that lived for 10.

In the salamander family, the largest American species also holds the record for longevity. One Hellbender (*Cryptobranchus alleganiensis*) made it through 29 years while a much smaller Spotted Salamander (*Ambystoma maculatum*) was known to have survived for 25 years.

Although these records by no means indicate the "average" life spans of Pennsylvania's cold-blooded reptiles and amphibians (a box turtle's life expectancy is 40-50 years), they do provide some food for thought. As we rush through our daily, fast-paced existence, it is interesting to reflect on the remarkable adaptations with which nature has endowed some of her slow-moving wildlife — particularly those with the ability to "buy time."



TOUCHING . . .

Every year at the Harrisburg Sports Show there is a portable trout pool placed somewhere in the building in which people pay to fish for trout for a short period of time. One year the pool was erected in the same area as our Commission's live display booth and one evening we witnessed quite a touching incident.

Deputy Melvin Moore and I were working at the booth answering questions from the passing public when a little 6-year-old boy, who was accompanied by his mother, came up to our booth crying — holding a live trout in his hand, ever so gently. Between sobs, he said, "Officer, I caught this rainbow down in that pool and the man won't let me put him back in the water. He said I must keep it. Could you put it in *your* tank so he won't die?" Who said our youth today don't care? It was really touching to see how upset this 6-year-old boy was because he had to keep that fish and could not release it. He certainly sets quite an example for some of our adult fishermen.

John E. Stepanski
Waterways Patrolman
Dauphin County

POOR SPORT!

During deer season, Joanne Haibach, Deputy Waterways Patrolman, was checking hunting licenses. She approached a hunter who, upon seeing that she was a woman stated that he wouldn't buy a license next year since they had to go to women wardens!

James R. Carter
Waterways Patrolman
S/Erie County

"JAWS" ALONG THE LEHIGH!

It was a great feeling to see the first legal musky taken out of the Lehigh River right in the city limits of Allentown on September 17, 1975. The angler making history by landing the first verified legal musky is Mr. Joseph Hoch of 1109 Tweed Avenue, Allentown, Pennsylvania.

Mr. Hoch landed this 33½-inch, 10-pound beauty on September 17, 1975. The location of his catch was near the junction

of the Lehigh River and the Little Lehigh Creek, always a local hot spot for pickerel and now apparently for musky as well.

The Fish Commission began stocking musky fingerlings in the river on October 3, 1972 and has stocked it every year since with fingerlings. Anglers in the Allentown area have some exciting fishing to look forward to over the coming years.

Fred Mussel
Waterways Patrolman
Lehigh County

BORN LOSER!

While heading to the Walnut Creek Access Area, Assistant Supervisor Hollen and I chanced to notice a Sunday hunter. We apprehended him and began to explain that Waterways Patrolmen are ex-officio Game Protectors also. Before we could finish explaining, the defendant said, "Yea, I know, the *game warden* arrested me Wednesday for not having life preservers."

Robert Lynn Steiner
Area Waterways Patrolman
Northwest Region

A FIRST?

On October 19, 1975, as I was on patrol along Harveys Creek, I observed one of the finest exhibitions of white water canoeing that I have ever seen. Normally, Harveys Creek is a pleasant-mannered trout stream, which can be forded at most places with hip boots. Due to recent heavy rains, Harveys Creek provided, for at least three hearty souls, some of the nicest white water canoeing you could find anywhere!

Claude M. Neifert
Waterways Patrolman
Luzerne County

ONE FOR THE BOOKS!

While on patrol of the Yellow Breeches Creek, Deputy Paul Kriner observed a fisherman taking four rods to the stream. Feeling sure that the man was going to use more than one or two rods Deputy Kriner waited and observed the fisherman. After a period of time, Officer Kriner was satisfied that the fisherman was not going to violate the law. However, he was puzzled why he

had four rods. Upon talking with the fisherman, Officer Kriner was told that he really disliked tying on hooks; so, he tied on four hooks before he left home — when he lost all four, he would return home.

Perry D. Heath
Waterways Patrolman
Cumberland County

ICELESS DERBY—

The Sinnemahoning Sportsmens Association held its first winter fishing derby last year and it did not turn out all that bad. It was hoped that some ice would be had, but the weather did not cooperate in this respect. Over the two day contest 37 entrants participated and several prizes were given for various categories. It is hoped that this year later planning and stocking by the club will result in "through-the-ice" type fishing which should bring out more fishermen.

Stanley G. Hastings
Waterways Patrolman
Cameron County

MAKE TIME!

While attempting to sell a prospective subscriber the *Angler*, SWP Stocks was informed, "I don't have the time to read the *Angler*." After a brief pause, the prospective purchaser stated that he had gotten some publications from the District Waterways Patrolman and that he would like to acquire several other free publications in addition to those he had. When Stocks heard the remark he made regarding not having time to read the *Angler*, he asked, "When will you have time to read the free publications?" Result - he found time to read the *Angler* as well!

Frank Schilling
Waterways Patrolman
Philadelphia Co.

DOUBLE DUTY—

Last year I saw more ice fishing in my district on the first of January than I have at any other time. Perch were cooperating quite well and an occasional bass and walleye really added an extra attraction. Snowmobiling conditions had not been very good and I believe that caused an increase in the fishermen on the ice. Insulated snowmobile boots are worn by a great number of the ice fishermen and from talking to many of the fishermen, it seems the suits, too, are really warm and comfortable.

Raymond Hoover
Waterways Patrolman
Tioga County

Ice Fishing — Statewide



Never tried it? Why Not?

photos by George E. Dolnack, Jr.

Some start fires, some sip coffee, some sizzle burgers, some simply fish; but, all ice fishermen have fun! You don't see anyone out there shivering, do you? Joe Texer and Jeff MacMillan, top, are simply readying some wood for their portable fireplace in case Wyoming County's Lake Winola takes on a chill. Dave Kapitula, above right, keeps his eye on the tipups right through a coffee break on Lake Carey. That pickerel and pair of crappies took minnows. It gets "hungry out" up on Wayne County's Prompton Lake and Charles Bednarz, left, is about to put an end to that. Ed Novak, right, found that a snowmobiler's suit is great for sitting out a cold but productive day on Lake Winola.





Hopewell Lake's panfish and bass kept that trio, above left, hopping for a while! Leroy Clemmer, Brad Swope, and Ronny Bergey have their attention focused on their bobbers.

Bill Evans and Al Huey, above, right, are well on their way toward a limit of trout on Fairview Lake up in Pike County. Lower left: Horace Pyle, who served as Chester County's "Fish Warden" for 25 years, chats with his successor, Waterways Patrolman Ray Bednarchik before hitting the ice on one of his favorite southeastern Pennsylvania Lakes. Kale Andrews, below right, found a pack basket to be a handy tackle totter during a jigging trip on Lake Carey.





Young Jury Bell was four years old when this photo was taken last year while he was ice fishing on Parker Dam Lake.



Ray Gearhart chose a picturesque setting where Muddy Run empties into Parker Dam Lake for his ice fishing activity.

**Photos by Russell Gettig,
Staff Photographer**

The Pennsylvania Fish Commission's Annual Report

Fiscal year July 1, 1974 to June 30, 1975

During the 110th year in the history of the Pennsylvania Fish Commission, the Board met four times: July 12, 1974, in Harrisburg; October 10, 1974, at Seven Springs; January 10, 1975, in Harrisburg; and, April 10, 1975, in Allentown. Three new Commissioners appointed in January, Leonard A. Green, John A. Hugya, and Jerome E. Southerton joined the other members in serving the cause of conservation as major policy makers, cooperating with the staff in its work of solving many difficult problems.

The average sportsman knows of the Fish Commission's activities by his attendance at a local sportsmen's club, his association with the Pennsylvania Federation of Sportsmen's Clubs, or affiliation with B.A.S.S., and/or Trout Unlimited; but, few realize the many committees and task forces which exist and function outside the everyday realm of the average angler on which we must serve not only to maintain Pennsylvania's fine fisheries and boating opportunities but to try to improve them. A partial list of these other activities in which we participate would include: Susquehanna Shad Advisory Committee, Atlantic States Marine Fisheries Commission, Environmental Quality Board, Water Resources Coordinating Committee, Wild and Scenic Rivers Task Force, Northeast Division of American Fisheries Society, Northeast Warmwater Workshop, Fish Feed and Nutrition Workshop, Symposium for Surface Mined Land for Outdoor Recreation, the Northeast Trout Forum, the Delaware River Fisheries Technical Committee, the Delaware River Fish and Wildlife Policy Committee, the Brandywine Creek Pollution Task Force, the Clearcut Committee, the Great Lakes Fisheries Commission, the Great Lakes Fish Disease Control Committee, the Northeast States Salmonid Brood Stock Selection Committee, the National Association of State Boating Law Administrators, the Northeast Association of Law Enforcement Chiefs, the Northeast Association of Conservation Engineers, the International Association of Fish, Game and Conservation Commissioners, the Blue Pike Task Force, and the Governor's Committee on Conservation Education. Such a list does not include the interfaces with other state and federal government agencies with whom we have daily dealings, many of them mandated by law. That's lots of time and activity for a relatively small staff.

Because of a 7% dip in license sales last year and the effects of inflation and personnel costs, we imposed an informal moratorium on hiring and promotions with the exception of the Sixth Class of nine Waterways Patrolmen who graduated November, 1974 and were in field positions no later than January, 1975.

As this report is being written we have the good pleasure of announcing that fishing license sales for the 1975 season will set an all-time record — more were sold than in any other year in our history. This is indeed fortunate — and timely — because the awards from the settlement of the statewide employees' strike are going to be quite expensive to the Commission.

In the spring of 1975 we again stocked a record 4.2 million catchable trout and our warmwater production was over 41 million fish. The Susquehanna Shad Restoration Program was not good this year; only 84 white shad were caught and tagged in the trap at Conowingo. At the same time, however, 20,000 river herring, consisting of alewives and bluebacks, were transferred up over the dam into the Conowingo Pool. Shad egg collection was much lower than expected with a grand total of 34 million eggs collected from the Virginia rivers and the Columbia River in Oregon and planted in the drainages of the Susquehanna.

Our new responsibilities for amphibians and reptiles resulted in a symposium of eighteen expert herpetologists to give us guidance toward formulating forthcoming rules and regulations deemed necessary to protect all cold-blooded creatures in Pennsylvania.

Our "Adopt-A-Stream" program and stream improvement activities went forward with great strides during this fiscal year. We have made much progress and, although the future is not up to us, if we can count on the same support and cooperation that we have received in the past, fishing and boating in Pennsylvania will still remain classic examples of varied experiences — all of them good!

Ralph W. Abele
Executive Director



Office of Information

In a continuing effort to keep every fisherman and boater fully informed about the wide variety and excellent opportunities Pennsylvania offers for the enjoyment of these outdoor pastimes, the Office of Information conducts an extensive program of public information, conservation education and training.

A small staff, consisting of a magazine editor, publications editor, education and training officer, a photographer and an exhibit technician is busy throughout the year, ably assisted by an equally small number of secretaries and clerks. By far the greatest force in communicating the Commission's "message" to the public, however, are the appearances made by waterways patrolmen, biologists, and other employees of the Commission. These men and women meet and talk with more people, appear on radio and television shows, man Commission exhibits, and answer questions in the course of their regular duties, thus multiplying manifold the work of the comparatively small number of persons assigned full time to public information and education duties.

Working under the direction of the Executive Director and the Commission, however, the Office of Information staff produced thousands of publications, maintained high quality in the Commission's official magazine, prepared exhibits and audiovisual aids, and issued many news releases to assist other Commission personnel and the news media in fulfilling their mission. Highlights of these activities include:

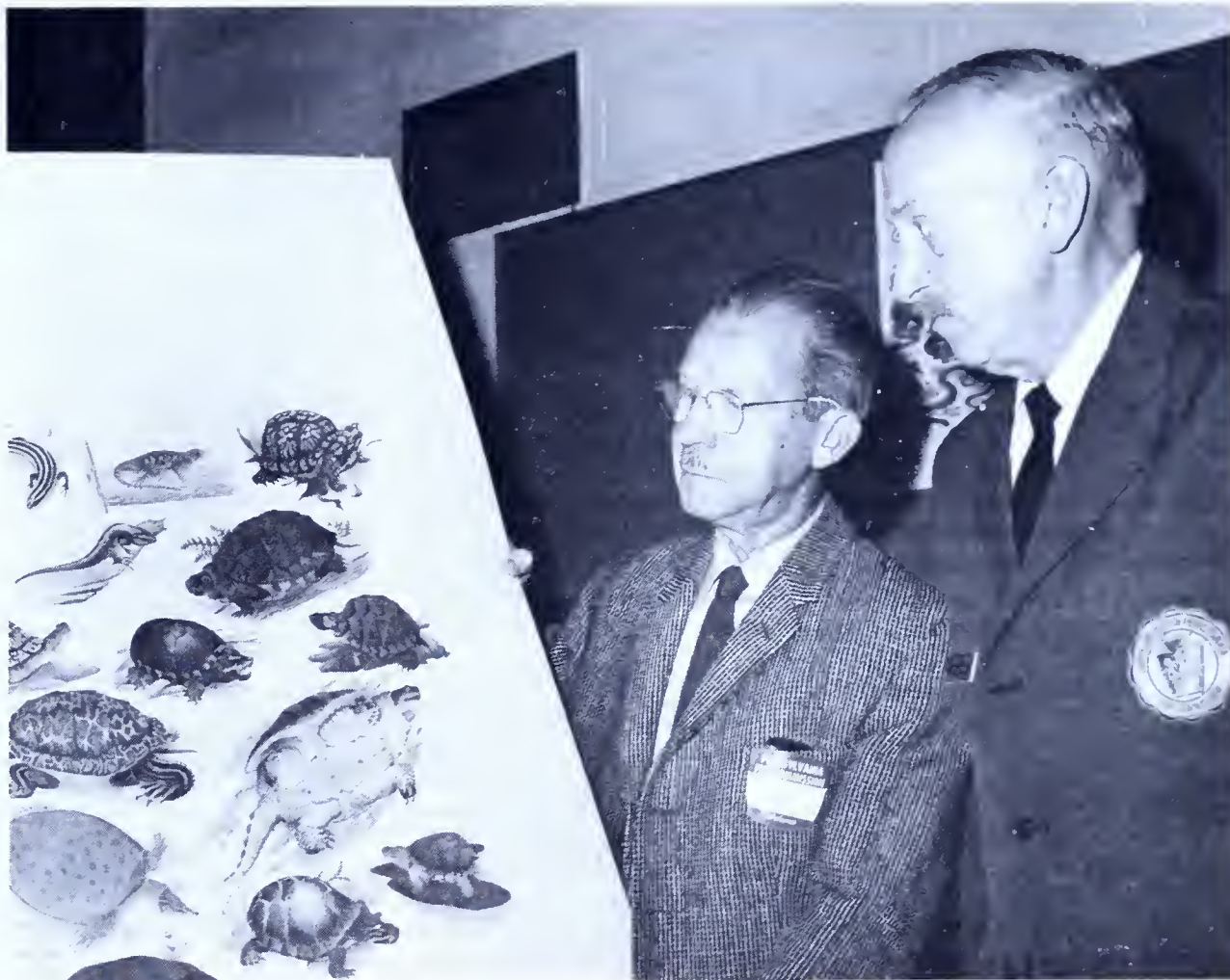
PENNSYLVANIA ANGLER MAGAZINE

The editorial concept of the official fishing and boating magazine of the Commonwealth continues to be that of presenting to Pennsylvanians and their out-of-state guests both verbal and pictorial guidance to the "how," "when," and "where" of enjoying the full potential of the waters of the Commonwealth for both fishing and boating.

Insofar as possible, in each issue both feature articles and regular monthly columns have a seasonally appropriate slant. Contributors to the Angler's pages are both staff personnel and free-lancers, all of whom are regulars along Pennsylvania's waterways and well-versed in their particular field.

As a service to all users of the Commonwealth's waters — especially boat-riding anglers who by the very nature of their recreation are high-

As its title would indicate, the Office of Information, through statewide news releases and in response to telephone calls, regularly provides anglers, boaters and outdoor enthusiasts with continually updated fishing forecasts and news on peak fishing activity; new Commission programs, new laws, rules and regulations of interest to users of state waterways.



Executive Director Ralph W. Abele and Dr. M. Graham Netting, retired Director of the Carnegie Museum, examine original art piece from which one of the new Commission wall charts was made. Both of the new charts are shown on the back cover of this month's issue in full color.

ANNUAL REPORT PHOTOS
by Russell Gettig,
Staff Photographer

susceptible to the unhappy prospects of capsizing, drowning, etc. — the writings of two specialists in the boating field now brings to the magazine's pages timely safe boating tips each month in an informative and enjoyable style.

SPECIAL PUBLICATIONS

Highlighting special publications this year was the second edition of the Pennsylvania Fishing and Boating Map, produced through the cooperation of the Pennsylvania Department of Transportation in connection with that agency's annual publication of the official state transportation map. This full color map of the Commonwealth locates more than 150 lakes and nearly 200 public access points on rivers and streams open to public fishing and boating. 100,000 copies were distributed free of charge to interested sportsmen.

Also produced during the year were two new full color wall charts: one depicting native Pennsylvania snakes, the other turtles, published as a start in the Commission's long-range educational program to acquaint the public with the value of these reptiles and amphibians, particularly the need to protect rare and endangered species.

AUDIOVISUAL AIDS

Although the Commission neither produces its own 16mm motion pictures, nor maintains a film lending library, copies of a few films produced elsewhere are purchased as aids to Commission personnel in their public speaking and conservation education activities. The basic audiovisual aid in this type of public relations program continues to be the slide talk, with or without taped narration and other sound effects. Two new slide programs were produced this year: one explaining how the fisherman's license dollar is spent by the Commission, the other explaining stream improvement projects and encouraging sportsmen to participate in this very worthwhile activity.

CONSERVATION EDUCATION

The main staff responsibility in this area was to provide the Commission's waterways patrolmen with the necessary equipment to present over 3,000 educational programs to the general public during the past fiscal year with over 500 showings of slide and motion picture programs provided as a part of these presentations.

Included in this total were appearances at 1,242 sportsmen's meetings; 296 elementary, secondary and college level groups; and, 139 church and civic organizations. Additionally, increased emphasis was placed on presenting educational materials to shoppers with appearances in various shopping malls and centers throughout the Commonwealth.

EXHIBITS

Work continued on the creation and production of various displays and exhibits for visitor centers at Linesville, Pleasant Gap, Huntingdale and other Commission hatcheries. The exhibits technician, who is also an accomplished wildlife artist, produced the original paintings from which the snake and turtle charts were reproduced and started work on painting portraits of frogs and salamanders for use in future charts.

CENTER CITY FISHING PROGRAMS

For the 8th consecutive year, the Conservation Education and Training Officer coordinated efforts to provide underprivileged children in major metropolitan areas with an opportunity to learn how to fish. Called the "Center City Cane Pole Fishing Program," this summertime activity involved more than 20,000 children in a relatively simple fishing experience, using cane poles, bobbers, lines, hooks and bait to catch carp, sunfish, catfish, and other warmwater species in nearby ponds or urban lakes.

Bureau of Waterways

Watercraft Division

Law Enforcement Division

Although the most obvious duties of Law Enforcement Division personnel are the enforcement of fish and boating laws, Waterways Patrolmen are involved in many more facets of Fish Commission operations. Many hours were required to conduct fishing and boating schools, attend sportsmen's clubs and civic group meetings and conduct various programs in the public school systems.

Information regarding Commission programs, the latest fishing methods, boating safety tips and other pertinent information was disseminated to these groups. Field officers become very much involved in the stocking program, as they are responsible for notifying the public of fish plantings, meeting the stocking trucks and seeing that the fish are properly distributed.

Preservation of water quality again was an area of prime responsibility for Waterways Patrolmen, as they investigated and reviewed 774 stream encroachment applications, and reviewed and commented on 748 mine drainage applications (almost double the previous year's totals). 331 pollution cases were reported and investigated by field officers with prosecutions resulting from most of the investigations, many through joint efforts with the Department of Environmental Resources.

Since the graduation of the last class from the H. R. Stackhouse School of Fishery Conservation and Watercraft Safety, all districts have been filled, resulting in a more efficient law enforcement program statewide.

A full force of 69 Waterways Patrolmen, assisted by more than 600 deputies, recorded 6623 prosecutions during the last fiscal year. 4108 of these were for violations of the fish laws and 2515 for boating violations. Additionally 2647 written warnings were issued for fishing violations and 2832 warnings were given to boaters.

Pennsylvania's power boating ranks swelled by another 10,000 last year, bringing the total number of registered boats in the Commonwealth to just over 152,000. Of this number, 71% were Class A boats (those under 16 feet in length), and 23% are in the Class 1 (16-26 foot range). An administrative cost saving measure was implemented this past season by committing the boater registration rolls to microfilm. It is thus possible to maintain an updated list that can be produced with greater frequency at approximately half the cost over the more cumbersome paper printouts that were previously available. With the growth in popularity of sailing and whitewater activities, the non-powered boating population is also on the increase, although an accurate census is not possible to obtain. With new PFD regulations covering nonpowered craft in effect for the second full year, field personnel tightened enforcement policies in this critical area. Sixty per cent of the boating citations written during the past year were for violations of PFD requirements.

Three small boats were added to the Commission's fleet last year, bringing the total now to 136. Due to the tremendous increase in equipment costs over the last several years, the entire fleet was surveyed with an eye toward maximizing the efficiency and cost effectiveness of the present inventory. The addition of a spare outdrive unit for immediate installation on a disabled craft resulted in no appreciable "down time" on inboard-outboard patrol craft during the year.

A new high intensity light designed to alert boaters of the approach of sudden squall or storms on Lake Erie has been installed at the Fish Commission's Walnut Creek Access Area west of Erie. The light consists of two Xenon-filled flash tubes timed to flash at one-second intervals and has a daytime range of five to ten miles, depending on atmospheric conditions, and a nighttime range of about 18 miles. The National Weather Service office at the Erie International Airport will activate the light when radar or other means indicates an unpredicted worsening of weather over the lake.

Below: The Sixth Class of Waterways Patrolmen. From left to right, standing: Deputy Chief of Law Enforcement, Edward Manhart, Terry Hannold, Barry Mechling, Kerry Messerle, Robert Kish and Robert Steiner. Kneeling: Bud Flyte, Gary Deiger, Harry Redline and Stanley Plevyak.





Installed to warn Lake Erie boaters of rough weather, the high intensity light at left is activated by the National Weather Service. The flashing light can be seen from five to ten miles out and boaters would be wise to heed its warning and head for safety immediately.

BOATING SAFETY EDUCATION

A complete review of the Fish Commission's Boating Safety education program was undertaken during the past year. With Pennsylvania's unique audiovisual course field-tested over a two-year period, it was possible to gain additional insights into the strengths and weaknesses of the over-all program. 25,000 Basic Boating textbooks, both student and instructor versions, were added to the materials inventory. Waterways Patrolmen conducted 49 six-hour boating schools with an overall student enrollment of 1269. An additional 1389 students elected to complete the course by correspondence. The Fish Commission acted as a clearing house for boating safety courses conducted by all the major volunteer organizations during the past fiscal year. Information sheets were provided with registration renewal applications listing courses offered by the Coast Guard Auxiliary, Red Cross, and U.S. Power Squadrons, in addition to the Commission's own courses. Interested respondents were directed toward courses of their choice throughout the state.

The educational program got wheels last year. Two specially equipped boating safety vans were on the road throughout the entire boating season. Each van was fitted out with special rear screen projectors, turning both into self-contained theater units for presenting the Commission's audiovisual course and related safety oriented films. Two of the Stackhouse School's recent graduates, Robert Steiner and Kerry Messerle, were assigned the vehicles and each covered a three-region territory throughout the state. Prior to taking on the mobile assignment Steiner and Messerle attended the Coast Guard's National Boating Safety School in Newport, Virginia for six weeks of additional extensive training in all facets of boating safety. The brightly painted vans soon became a familiar sight in campgrounds, sportsmen's shows and shopping malls throughout Pennsylvania.

Waterways Patrolmen and their deputies boarded 11,693 boats in a continuing effort to keep Pennsylvania waterways safe for all users. 60% of all infractions involved personal flotation devices (PFDs); either defective or carried in insufficient numbers.



The completion of the new Raystown Lake impoundment, an Army Corps of Engineers project in Huntingdon County, now offers Pennsylvania boaters an 8300 acre recreational water source. Lake Raystown, now the largest man-made lake wholly within the Commonwealth, operated for the first season under a provisional zoning plan worked out between the Fish Commission and the Corps.

Throughout fiscal 1975 a total of 25 access areas were under various stages of construction, development, or improvement throughout the state, wholly or partially funded with boating fund monies.

Capacity plate applications increased slightly during the year. A capacity plate is required to be displayed on all monohull vessels less than 20 feet in length, excepting canoes, kayaks, sailboats, or inflatables. Since the inception of Pennsylvania's capacity plate program in 1969, more than 22,500 plates have been issued by the Watercraft Division.

BOATING ACCIDENTS

For purpose of continuity with the overall boating program, accident statistics have always been compiled on an annual, rather than a fiscal year basis. Pennsylvania followed a nationwide pattern in 1974 with a reduction of fatalities and the year ended with 31 deaths as the result of boating accidents. This downward trend ended abruptly in 1975 with the first reported boating accident involving a double fatality recorded in January. The first thirteen boating accidents reported in 1975 involved 18 deaths. As of October 20, 1975, 39 boating fatalities had already occurred on Commonwealth waters, with the late fall fishing and waterfowl hunting season yet to come. Although the total number of reported accidents remained almost the same over the past two years, the increase in fatalities is definitely cause for concern.

Nearly 60 per cent of the boating fatalities that occurred in 1975 involved nonpowered, unregistered craft, with canoes heading the field by a great majority. Of all the fatalities recorded thus far in 1975, only 13 of those happened during the Memorial Day-Labor Day boating "season." Most fatal accidents occur on Commonwealth waters when the water is high and/or cold. Many deaths are the direct result of hypothermia, the lowering of the body's core temperature to the point where the vital organs cease to function.

Bureau of Fisheries & Engineering

The varied programs carried out by the bureau continued to present new challenges to bureau personnel during the past fiscal year. In order to successfully blend the efforts of available skilled and technical staff with allotted funds and available equipment, bureau administrative and supervisory personnel were required to continuously seek new performance methods and improve established techniques.

The bureau staff devoted most of its efforts to direct administration of the Fisheries and Engineering programs, but also participated in several coordination and planning projects which directly effect all Commission programs.

Under our Water Resources Coordinator's direction, two special studies were completed during the summer of 1975. One of these, funded by the Appalachian Regional Commission, evaluated the impact of the 1972 Agnes Flood on six diversified trout streams. The study determined that the flood itself had no adverse effects upon the fish or fish food chain, but that subsequent channelization, which occurred on 500 miles of our streams, had an extremely unfavorable impact upon the gamefish populations. It was determined that most channelization observed was both needless and ineffective. The annual recreational loss as a result of waters channelized in 1972-73, was placed at \$5 million.

The second study, updating the Outdoor Recreation Plan, accomplished with Federal Bureau of Outdoor Recreation funding assistance, has provided an improved inventory of fishing and boating resources and usage statewide, required for the effective management of these waters. Maps of navigable waters and another of degraded waters of the Commonwealth were produced through this study. Another important result of this study has been the implementation of a major long-term effort by the Management Section to classify all stocked trout waters by quality, an important step to future effective management of these waters.

Under the direction of the Water Resources Coordinator, a three-year program of improvements to Commission-owned Big Spring Creek was completed in Cumberland County. This stream is now producing some of the largest trout caught in the state. As chairman of the Low Flow Regulation Task Force, the coordinator also helped produce a regulatory document for minimum flows past diversions and impoundments which has been incorporated into the State Water Plan. This document will help preserve and restore adequate flows to affected streams statewide.

Our coordinator also served as a key member of the Wild and Scenic Rivers Task Force, which has completed its recommendations of streams to be placed under the protective custody of this act.

A new study, funded by the U.S. Forest Service, is surveying fishermen use patterns and preferences. This telephone survey will be evaluated to provide factual basis for effective fisheries management in order to best serve our licensed anglers' needs.

The Water Resources Coordinator also represents the Fish Commission, along with representatives of other state agencies, on other committees such as Water Plans, Land Use, Data Collections, and Water Resources Coordinating (Vice Chairman). As a member of these committees, he is the Commission's spokesman to express and protect the needs of the state's boaters and fishermen.

Fisheries Division

The Division of Fisheries is organized into four sections: MANAGEMENT, RESEARCH, COLDWATER PROPAGATION, and WARMWATER PROPAGATION; and, the Cooperative Nursery Branch. These five units administer all aspects of Pennsylvania's recreational fishery.

Division staff members were involved in field investigations, educational activities and advisory services. Personnel from the division have attended various organized seminars, workshops, professional society

meetings and training courses. Members of the staff also represented anglers at various hearings and as participants in a number of committees.

FISHERIES MANAGEMENT SECTION

During the fiscal year 1974-75, the FISHERIES MANAGEMENT SECTION added several fisheries technicians to the staff, formally assigned two area fisheries managers and assigned one aquatic biologist for training as an area fisheries manager. The establishment of the area fisheries manager concept was considerably strengthened by these measures and much greater service to the fishing public, better maneuverability, flexibility and more rapid response to fisheries management problems has resulted.

During this period, the staff conducted 164 stream surveys and 35 lake surveys. These surveys contributed information for fisheries management endeavors, including assessment of fish kills and pollutions, evaluation of established fisheries including wilderness trout streams and field research efforts.

Some examples of the results of increased fisheries management efforts which are of significant interest as follows: stocking of the Curwensville Reservoir in Clearfield County with walleye fry and other gamefish took place for the first time; introductory plantings of muskellunge have been made in the North Branch of the Susquehanna River and the Chemung River. Introductory stockings of tiger muskellunge took place in the Allegheny River in Allegheny County, and the Raystown Branch of the Juniata River, Bedford County. The main stem of the Susquehanna River in Union, Northumberland, and Perry Counties has been officially added to the approved muskellunge stocking list, and a second stocking of muskellunge and an introductory stocking of walleye have been made in the Monongahela River. It has been determined that the 1973 trout fingerling plant in the Upper Youghiogheny River was a great success and this initial stocking has been followed up with additional trout plantings. Studies also revealed that walleye, smallmouth bass, and panfish are now present in this section of the Youghiogheny River.

This fiscal year was the first year of a federally funded warmwater stream inventory project, and fourteen streams in the Allegheny and Ohio River Basins were sampled to rate the abundance of sport fish. Eventually the information will be made public to advise anglers where to find the best fishing and what species of fish are available.

Biologists electrofishing to determine fish populations.



STATE-FEDERAL STOCKING PROGRAM

COLD WATER FISHERIES

Number of trout streams stocked	912	
Number of trout streams stocked (<i>Experimental</i>)	3	
Miles of trout streams stocked	5,040	
Miles of trout streams stocked (<i>Experimental</i>)	32.5	
Acres of trout streams stocked		18,982
Acres of trout streams stocked (<i>Experimental</i>)		685
Number of ponds and lakes stocked with trout	94	
Number of lakes stocked with trout (<i>Experimental</i>)	15	
Acres of ponds and lakes stocked with trout		11,900
Acres of lakes stocked with trout (<i>Experimental</i>)		15,473
Total acreage		47,040
Number of cold water fish (<i>trout and salmon</i>) stocked:		
Fingerling	—	1,800,982
Adult	—	4,455,241
Total		6,256,223

WARMWATER FISHERIES*

Miles of warmwater streams stocked	245	
Miles of warmwater rivers stocked	928	
Number of warmwater ponds and lakes stocked	211	
Acres of warmwater ponds and lakes stocked		70,534
Acres of Lake Erie in Pennsylvania		640,525
Total acreage		711,059
Number of warmwater fish stocked:		
Fry	—	42,232,000
Fingerling	—	1,890,595
Adult	—	46,090
Total		44,168,685

GRAND TOTAL OF ALL SPECIES STOCKED 50,424,908

*Many of the warmwater areas approved for stocking in the Commonwealth DO NOT receive fish each fiscal year. For this reason, we have changed our past practice of reporting totals for all the approved areas to only those areas which were actually stocked during this fiscal year; consequently, the figures recorded under this category are significantly lower than in previous years.

Student officers are instructed by chemist William Myers.



Benner Spring Research Station boasts modern facilities.

Other special activities included: an evaluation of the relative return of trout stocked in the fall and spring in Potter and Tioga Counties; a study of stocking fingerling brown trout in selected streams; a study of the effects of rerouting a stream into an artificial channel constructed to bypass a new highway; an evaluation of lake drawdowns in controlling aquatic vegetation and improving the size of gamefish and panfish; an evaluation of the existing trout population in the newly established FISH-FOR-FUN area on Penn's Creek in Mifflin County; an evaluation of the walleye stocking program in Pymatuning Lake; a kokanee salmon project in Wayne County; a study on the trout population in Big Spring Creek, Cumberland County, in regard to special regulations and habitat improvement; a study of the effect various forestry practices have on trout streams; processing 160 applications for the use of aquatic herbicides in the state; a revision of policy to allow for a more refined system of creating and maintaining wired areas; and the investigation and recommendation of approval on 3 new FISH-FOR-FUN areas.

Division biologists normally engaged in fisheries management activities are also assigned to continuing special studies. These include: an interstate study of anadromous fish in the Delaware River; a shad restoration project on the Susquehanna, Lehigh and Schuylkill Rivers; a study of water quality and fish stocks in the Pennsylvania waters of Lake Erie and a survey of fish populations and environmental conditions in the Allegheny River, from Kinzua Dam to Franklin.

Staff personnel conducted a varied and far-reaching conservation program to numerous groups during the 1974-75 fiscal year. Key personnel testified or represented the Commission at several public hearings centering mainly on water pollution. Meetings with other agencies from the local to federal level were held with the goal in mind to better coordinate land and water use practices with fisheries management goals.

FISHERIES RESEARCH SECTION

The RESEARCH SECTION continued to work on problems associated with fish culture. The staff's work load is divided into five related fields of endeavor. These include: fish pathology, fish culture research, water chemistry, hatchery effluent studies and whirling disease research — the last two of which have received federal grants-in-aid.

Research activities consisted of the following: intensive culture of esocids and salmonids; Amur River pike hybridization work; marsh rearing of esocids; intensive culture of brine shrimp; evaluation of aeration systems; pond fertilization studies; study of the life cycle of *Myxosoma cerebralis* (whirling disease parasite) as related to brown trout, rainbow trout, and coho salmon; development of tissue staining tech-

niques; diet studies; viral studies; evaluation of drug effectiveness in disease control; study of fish disposal systems; chemical analysis of water samples from state fish hatcheries, cooperative nursery waters, field surveys and various pollution incidents; efficiency studies on hatchery wastewater treatment systems; bacteriology and general research. The staff also conducted 256 diagnostic pathology investigations at Fish Commission hatcheries to ensure the health and quality of our hatchery products. Assistance was also given to the Cooperative Nursery Branch in the control and treatment of diseases.

A fish culture school was sponsored by this section permitting each participant to broaden his perspective of the Pennsylvania Fish Commission's programs, responsibilities and goals.

COLDWATER PROPAGATION SECTION

The COLDWATER PROPAGATION SECTION reached a new plateau stocking nearly four million adult trout. Again, a quality product was delivered to Pennsylvania's streams and lakes for its anglers. This was done amid renovations at a number of Commission fish cultural stations. Labor costs and operating costs continued to rise while fish food costs were relatively stable. New techniques were developed at some stations and when adopted at other facilities should further aid in the efficient rearing of trout. A total of ten fish cultural stations contributed to this year's effort of an average 9.33" adult trout.

Commission propagation personnel were again quite successful in their efforts to maintain the Lake Erie salmon program. During early 1975, 483,000 chinook salmon fry and 363,381 coho salmon fingerlings were released into the tributaries of Lake Erie and Presque Isle Bay. Both of these stockings set new Pennsylvania records.

FISH STOCKED BY STATE HATCHERIES ONLY

<i>SPECIES</i>	<i>FRY Number</i>	<i>FINGERLING Number Weight</i>
TROUT		
Brook Trout	290,700	4,266
Brown Trout	262,700	2,950
Rainbow Trout	424,800	8,552
Palomino Rbw. Trout	1,310	131
Lake Trout		
Steelhead Trout	9,750	682
TOTAL TROUT	989,260	16,581
SALMON		
Coho	325,722	19,775
Kokanee	3,000	25
Atlantic		
Chinook	483,000	1,734
TOTAL SALMON	811,722	21,534
GAMEFISH		
Chain Pickerel	9,250	953
Largemouth Bass	166,000	40,150
Muskellunge	444,000	153,692
Northern Pike	81,000	6,590
Smallmouth Bass	600	43
Walleye	41,527,000	18,613
Amur River Pike Hybrids	14,000	
TOTAL GAMEFISH	42,232,000	228,895
PANFISH		
Black Crappie	71,450	360
Bluegill		
Brown Bullhead		
Carp		
Sunfish (Common)		
White Crappie		
Yellow Bullhead		
Yellow Perch	2,130	131
TOTAL PANFISH	73,580	491
GRAND TOTAL	42,232,000	2,103,457

WARMWATER PROPAGATION SECTION

The WARMWATER PROPAGATION SECTION's activities were more varied than those of the Coldwater Section. Species and numbers required were determined in response to fisheries management needs and to continue to support the Commission's cane pole and community pond programs. Significant advances were made in development and implementation of techniques for use of dry diet in rearing warmwater gamefishes. Warmwater propagation staff made important contributions on this subject at the Interstate Muskellunge Workshop. The success of the staff effort was demonstrated by a record annual production of muskellunge (tiger and regular) fingerling — over 150,000.

COOPERATIVE NURSERY BRANCH

The Cooperative Nursery Branch continued to play a vital role in involving Commonwealth sportsmen in enhancing their own sport. Commission hatcheries, through the Cooperative Nursery Branch, furnished 868,100 fingerling trout, 5,000 coho salmon parr, 12,500 largemouth bass fry, 112,500 eyed brook trout eggs, 23,350 eyed brown trout eggs, 30,000 winter steelhead eggs (from Oregon), 280,000 green walleye eggs and 10 quarts of daphnia for 134 organizations sponsoring 171 trout nurseries and 5 largemouth bass nurseries in 51 counties. Cooperative nurseries released trout or salmon in 588 water areas in 52 counties; their warmwater species were stocked in 14 water areas in 2 counties.

The results of the propagation efforts at Commission fish cultural stations for both coldwater and warmwater species are summarized in the accompanying table.

DURING FISCAL YEAR JULY 1, 1974 to JUNE 30, 1975

<i>ADULT Number Weight</i>	<i>GRAND TOTAL Number Weight</i>
942,574	334,834
1,375,392	500,213
1,574,105	639,581
54,129	28,887
33,600	3,590
3,979,800	1,507,105
37,659	3,986
500	8
38,159	3,994
	9,250
	206,150
	597,692
	87,590
	600
3,600	5,835
3,600	5,835
7,085	6,210
4,956	2,550
23,774	16,789
4,000	13,280
1,458	289
48	36
1,169	786
42,490	39,940
4,064,049	1,556,874
	78,535
	4,956
	23,774
	4,000
	1,458
	48
	3,299
	116,070
	48,399,506
	1,607,160

Engineering Division

The Engineering Division is responsible for maintaining, improving and developing the statewide system of facilities supporting the Commission's various fishing and boating programs. The division's expenditures for the fiscal year 1974 totaled \$2,880,000. Funding was derived as follows: Commonwealth Land and Water Conservation and Reclamation Act (Project 500) — 47%; Fish Commission Fish Fund — 23%; Fish Commission Boating Fund — 17%; and Federal Aid in Sport Fish Restoration Act (Dingell-Johnson Act) — 13%.

During the year the division was engaged in five major fish cultural station projects. The new \$1,330,000 Oswayo Fish Cultural Station, Potter County, was completed in August, 1974. At the Reynoldsdale Fish Cultural Station, Bedford County, construction continued on the \$608,000 Visitors Center and Administration Building. The first phase was completed, and a second begun on a \$1,000,000 renovation project at the Tionesta Fish Cultural Station, Forest County. A \$1,900,000 project was in progress for concrete raceways, and other fish production and research structures at the Spring Creek Rearing and Benner Springs Research Stations, Centre County. In June, 1975, the plans were completed, bids opened, and a \$678,000 contract awarded for construction of the Raine Fish Cultural Station, Erie County. Lesser projects included property surveying, well work, and revamping of

electrical systems at the Corry-Union City Fish Cultural Stations, Erie County; improvements to pipelines, and completion of superintendent's dwelling at the Big Spring Fish Cultural Station, Cumberland County; installation of an oil burner and converter at the Pleasant Mount Fish Cultural Station, Wayne County; the renovation of the second floor of the hatch house, construction of a head aerator building, bulk feed bins, and a Fisheries Management Laboratory at the Pleasant Gap Fish Cultural Station, Centre County; the installation of new roofs on the existing dwellings at the Raine Fish Cultural Station, Erie County; and surveys and design studies for the future development of warmwater fish rearing facilities at existing stations.

The Commission controls, by ownership or lease, 215 facilities, which provide the fishing and boating public with free access to the waters of the Commonwealth. This is a modest number considering that in Pennsylvania there are over 2,400 dams, reservoirs, and natural lakes, and 45,000 miles of waterways. Two new access areas were completed this year: Kimmets Lock Access, Lehigh County (\$110,000); and Struble Lake Access, Chester County (\$60,000). A third was completely rebuilt, Musser's Dam Access, Snyder County (\$45,000). Extensive paving work was completed at Belmont Lake Access, Wayne County, and Amity Hall Access, Perry County. At ten other access sites progress continued on nearly \$1,000,000 worth of development and improvement projects, scheduled for completion next year.

Additional raceways designed by the Engineering Division at the Huntsdale Fish Cultural Station shown under construction.





The Raine Fish Cultural Station in Erie County, shown here under construction, was designed by the Engineering Division.

A 250-acre fishing and boating recreation dam, Lake Kahle, in Clarion and Venango Counties was completed in October, 1974. The development project, from engineering design through construction, spanned three years and cost \$1,073,000. Two lesser dam projects completed were the grouting of the spillway area at Hemlock Lake, Indiana County (\$25,000), and the installation of riprap at Tamarack Lake, Crawford County (\$18,000). Under design is a replacement for the existing dam structure at Ford Lake, Lackawanna County.

The work of the division continues to be the mainstay of the Commission's anadromous sports fisheries program. Permanent propagation and administrative facilities are vital to its continuation. To that end, the division: designed the Raine Fish Cultural Station, which when completed will rear the bulk of the Commission's Lake Erie salmon; is expanding Walnut Creek Access on Lake Erie to accommodate the tremendous numbers of sport fishermen and their boats; is expediting the engineering input required to determine the feasibility of acquiring sites for future additional salmon rearing facilities such as the Divine Word Salmon Station, Erie County; is engaged in extensive water well source explorations for supplementary water supplies needed at Corry, Union City, and Tionesta Fish Cultural Stations for increased production capability; and supplies the technical personnel and materials to maintain, repair, and improve the traps, weirs, and other devices operated at critical periods throughout the anadromous program.

The Fisheries Environmental Services Branch continued watchdog operations over the Commonwealth's waterways. In conjunction with field inspections and countless meetings, it reviewed and critiqued: 960 DER permit applications; 751 mine drainage applications; 702 sets of highway plans; 824 U.S. Army Corps of Engineers Permit Application

Notices; 235 Federal Environmental Protection Agency Public Notices; 545 permits; and 131 miscellaneous, flood control and stream improvement projects. Branch personnel also devoted many days and nights supervising and working with youth organizations such as the Boy Scouts and the Youth Conservation Corps on stream improvement projects, some of which are located on: Lick and Stone Runs, Clearfield County; Medix Run, Elk County; Kettle Creek, Potter County; and Trout Run, Clinton County. The benefits of this type of work are threefold: Tangible improvement to aquatic resources; conservation education; and the promotion of sport fishing.

The routine maintenance of public use facilities consisting of all Commission managed access areas, lakes, ponds, and improved streams is performed by the Engineering Division's four regionally located maintenance units. The duties of the five man staff headquartered at each includes mowing grass, policing litter, cleaning comfort stations, etc. As needed, they also accomplished other tasks, i.e., placed new berthing docks at Clarion River Access, Clarion County; installed concrete piers for boat docks at Tarentum Access, Allegheny County; built a parking lot and access road at Laurel Hill Creek Reservoir, Somerset County; and demolished unserviceable buildings at Neshanock Creek Access, Lawrence County. Out of the Division's total expenditures for the year, \$355,000 was for maintenance operations.

Major goals of the Pennsylvania Fish Commission are to increase water oriented recreation opportunities for all Pennsylvanians by: developing fishing and boating access areas; improving the Commission's own 54 lakes; modernizing fish cultural stations; and protecting and restoring the aquatic resource. It was toward the fulfillment of those goals that all the effort of the Engineering Division was directed during the fiscal year 1974-75.

Bureau of Administrative Services

Increased fishing pressure, more boating, and other water sports place an ever-increasing burden on Pennsylvania waterways. The Pennsylvania Fish Commission continued this year to accelerate all its programs and activities to provide greater services to the public. The administrative services increased substantially as this greater demand was reflected throughout the Commission activities.

The Bureau's operations includes such administrative services as the issuing of fishing licenses, purchasing and procurement, land and water acquisition, personnel and payroll, budgeting and fiscal programming, planning, training, issuance of special permits and licenses, federal aid coordination, automotive services, affirmative action, central files, mail processing, inventory records, messenger service, warehousing, plus other incidental functions required in the day to day operations of the Pennsylvania Fish Commission.

The fishing license sales during the first half of the fiscal year leveled off, but a marked increase was indicated in the last half of this fiscal period. This increase could mean another record license sales in the next fiscal period.

LAND & WATER ACQUISITION

Water in quantity, whether lake, river or ocean, has always held a fascination for man. Fishing and boating reflect but two of man's interest in water and likewise are of principal concern to the Fish Commission which is charged with the administration thereof.

It is quite obvious that a wave of development is sweeping over the Commonwealth, not only forcing land values higher and higher, but in many areas rapidly depleting the availability of waterfront properties. The Fish Commission, through its Real Estate Division's continuous land acquisition program, is taking positive action to acquire in fee, or by long term lease agreement, prime fishing and boating water throughout the state.

In addition to land acquisition, this division is concerned with the property management of all Commission properties to protect and preserve them from various forms of encroachments which threaten their continued existence.

Some of the major acquisitions and lease agreements completed or worked on during the past fiscal year include:

Land Acquisition

Dunlap Creek, Fayette County, 173.79 acres - new lake project; Jacobs Creek, Fayette County, 228.63 acres - new lake project; Hankins Pond, Wayne County, 19.7 acres, additional land to existing lake; Lake Kahle, Clarion and Venango Counties, 1.253 acres, additional land to existing lake.

Stream Acquisition

Penns Creek, Centre, Mifflin and Union Counties, 429.71 acres, approximately 3.2 miles.

Access Areas Acquired

Tidioute Access, Warren County, 4.317 acres, access to Allegheny River; Mifflintown Access, Juniata County, 1.805 acres, additional land at existing access area.

Additional Land Acquired (Hatcheries)

Union City Hatchery, Erie County, 6.560 acres (four properties) Addition to existing facility; Novel Tract (Elk Creek), Erie County, 1.710 acres, salmon holding facilities; Divine Word Tract, Erie County, 14.964 acres, salmon holding facilities.

Lease Agreements

Lehigh Canal Park, City of Allentown, construction agreement for fishing and boating; Stovers Dam, City of Lebanon, water supply reservoir, walk-in fishing access only; Rexmont Dam, City of Lebanon, water supply reservoir, walk-in fishing access only; Laurel Creek Reservoir, Borough of Lewistown, water supply reservoir, walk-in fishing access only; New Cumberland Locks and Dams, U.S. Corps of Engineers, fishing and boating; Lake Winola, Wyoming County, multipurpose lease agreement; Mauch Chunk Lake, Carbon County, maintenance agreement; Struble Lake, Chester County, maintenance agreement; North East Access, Erie County, maintenance agreement.

Right-of-Way Agreements

Goldsboro Access, York County, with Metropolitan Edison; Huntsdale Fish Cultural Station, Cumberland County, with P P & L; Kimmets Lock, Lehigh County, with P P & L; Reynoldsdale Fish Cultural Station, Bedford County, with Penelec; Glade Run Lake, Butler County, sewer line; Canonsburg Lake, Washington County, sewer line; Lake Kahle, Clarion and Venango Counties, access road.

In addition to the above, 21 requests were processed through Property and Supplies for lease space for patrol boats, regional offices, warehouse space and maintenance headquarters.

Land for 250-acre Lake Kahle, in Clarion and Venango Counties was acquired with Project 70 funds by the Real Estate Section.



FEDERAL AID

The section on Federal Aid Coordination prepared and presented two new projects* and nine new project segments to existing projects** during the year ended June 30, 1975. Total Federal reimbursements and grants for the year were \$1,461,953.78 which included \$27,961.45 due from the prior year. There were no billings, to the Federal Government, outstanding at the end of the year. Total reimbursements were distributed as follows:

Fish Fund	\$ 869,116.82
Boat Fund	198,392.00
Project "500"	332,846.68
Project "70"	<u>61,598.28</u>
Total	\$1,461,953.78

Documentation was executed during the year on the following existing and new projects:

Anadromous Fish Fund

	Planned Cost	Anticipated Reimbursement
** Coho (AFS-5-4)	\$ 90,000.00	\$ 45,000.00
** Brandywine Shad Study (AFSC-4-6)	2,500.00	1,666.50
** Delaware River Research (AFS-2-9)	<u>12,500.00</u>	<u>-0-</u>
	\$105,000.00	\$ 46,666.50

Fish and Wildlife Restoration (D-J)

** Whirling Disease (F-35-R-7)	\$ 26,764.00	\$ 20,073.00
** D-J Maintenance (F-30-D-10)	191,500.00	143,625.00
** Shad Study, Schuylkill & Lehigh Rivers (F-48-R-3)	21,014.86	15,761.15
** Warmwater Stream Inventory (F-49-R-2)	16,651.00	12,488.25
** Trout Protein Study (F-52-R-1)	<u>14,124.00</u>	<u>10,593.00</u>
	\$270,053.86	\$202,540.40

Commercial Fish Act

** Commercial Fish Study, Lake Erie (3-167-R-3)	\$ 50,000.00	\$ 37,500.00
** Commercial Effluent Study (3-242-R-1)	<u>49,154.88</u>	<u>36,866.16</u>
	\$ 99,154.88	\$ 74,366.16

U.S. Department of Transportation (U.S. Coast Guard Grant)

** Boating Safety Program (1501-42)	\$198,392.00	\$198,392.00
	\$198,392.00	\$198,392.00
GRAND TOTALS	\$672,600.74	\$521,965.06

MISCELLANEOUS LICENSES & PERMITS

The Miscellaneous License and Permit Section reviewed and issued the following:

Regulated Fishing Lake	285
Artificial Propagation	170
Live Bait Dealers	381
Transportation	76
New Permit	198
Scientific Collector	143
Draw Down	130
Dynamite and Screen	13

The following applications were reviewed and acted upon in conjunction with other Commonwealth agencies:

Mine Drainage	748
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SAND & GRAVEL ROYALTIES

The Pennsylvania Fish Commission received \$228,405.79 in royalty payments from dredging companies operating on Commonwealth waters during fiscal year 1974-75. This reflects a drop in receipts of 24.58%, or \$74,477.04 from the previous year's revenue.

Several reasons can be attributed to this decline in receipts. The principal reason is that several high volume dredgers have ceased operations in Commonwealth waters, plus the fact that of the remaining registered dredgers, only two show an increase in royalty payments over the previous fiscal reporting period.

It can, therefore, be reasonably assumed that the law of supply and demand for this commodity is being demonstrated by the currently depressed conditions of the construction industry.

PERSONNEL

During this fiscal year increased activity occurred in transactions processing, labor relations, employee benefits and services, and in classification and pay.

Through a new computerized personnel system, several thousand transactions were processed such as salary changes, appointments, code changes, etc. In addition, a thorough review was made of all information in the computer file to insure its accuracy. Hundreds of employment inquiries were handled.

In labor relations there was an increase in overall activity: more grievances were handled, additional training was given to supervisory personnel, and a strike contingency plan was developed. After nearly two years of negotiations, the law enforcement agreement covering Waterways Patrolmen was signed.

To insure that employees fully understood their fringe benefits, briefings were held at nearly all Commission offices and facilities. Also, increased emphasis was placed on individualized retirement counseling, including the processing of military and prior service time. An accident analysis was completed.

In classification and pay, a classification study was completed covering nearly all field clerical positions. Additional studies were made of other major classifications.

Back in 1776, our forefathers went fishing in many of the same waters we fish today for the fun of it.



In those days, quite often they did it for survival. In fact, fishing was probably America's first industry. It had to be. If you recall your history, the women stayed home and did all the garden work while the men went fishing. And we thought we could improve on that!

During the Bicentennial Year, many of our vehicles will be seen sporting this decal as a reminder to all that fishing is still fun! Get a fishing license and, while you're at it, take a friend along fishing.

Comptroller's Office

The Fish Fund continues to show an improving financial position. The results of operations for the 1974-75 fiscal year reflect a net operating increase of \$963,925.31 which brings the amount available for commitment and expenditure as of June 30, 1975, to \$4,821,696.81.

Total revenue received amounted to \$9,325,425.77 which represents an increase of \$2,193,337.34 over the preceding fiscal year. This was due primarily to increased resident, nonresident and other fishing license revenue resulting from the recent increase in fees approved in Act 47, increased federal aid, and increased interest earnings.

Expenditures and commitments made during the 1974-75 fiscal year totaled \$8,361,500.46. This figure represents a \$1,597,172.54 increase over the previous fiscal year due mainly to the payment of higher salaries and increased employee benefits resulting from collective bargaining, increased acquisitions including Penns Creek, and increased costs of services and supplies due to the inflationary pressures of the present economy.

In summary, the Fish Fund is in a stronger financial position than it was a year ago. However, it should be pointed out that while revenue will tend to level off, the cost of services and supplies will continue to spiral upward.

The results of operations for the Boating Fund for the 1974-75 fiscal year reflect a net operating increase of \$386,534.18 which brings the amount available for commitment and expenditure as of June 30, 1975 to \$2,848,299.49. Receipts totaled \$2,030,023.60, while commitments and expenditures amounted to \$1,643,489.42. The Boating Fund continues to play a very important part in the overall operations of the Fish Commission. This year as part of our annual report, we are again presenting a combined statement of the expenditures and commitments of the Fish Fund and the Boating Fund to more clearly illustrate the impact of both funds on the activities of the Fish Commission.

EARMARKED FUNDS

Act 458, Session of 1963, of the Fish Law, provides that fifty cents (50c) from each resident and nonresident fishing license fee, senior licenses excluded, be expended for "(1) the acquisition, leasing, development, management and maintenance of public fishing waters and of areas for providing access to fishing waters and the carrying out of lake and stream reclamation and improvement; (2) the rebuilding of torn out dams; and (3) the study of problems related to better fishing but in no event shall any of the funds be used for propagation of trout." In order to meet this requirement of the Fish Law, a minimum expenditure of \$400,665.50 for the above stated purposes was necessary. Actual expenditures were \$894,702.86 resulting in the Fish Commission spending \$494,037.36 more than the required minimum for these activities during the fiscal year.

The Project 500 Fund is a statewide bond issue established for the development of public outdoor recreation areas, and the conservation of Commonwealth land and water resources. During the fiscal year, the Fish Commission expended and committed \$4,174,372.36 bringing the cumulative totals of Project 500 activities to \$16,764,690.52 since these funds became available in 1968. For more information on Project 500 activities, refer to the preceding section under the Engineering and Development Division.

FISH FUND	AMOUNT AVAILABLE FOR COMMITMENT & EXPENDITURE	JUNE 30, 1975
Amount Available for Commitment and Expenditure, July 1, 1974		\$3,703,733.74
Plus: Prior Year Adjustment—Cancellation of Prior Commitments		154,037.76
Adjusted Amount Available, July 1, 1974		\$3,857,771.50
Results of Operations—1974-75 Fiscal Year		
Total Revenue Received	\$9,325,425.77	
Less: Expenditures and Outstanding Commitments	8,361,500.46	
Net Operating Increase		963,925.31
Amount Available for Commitment and Expenditure, June 30, 1975		<u>\$4,821,696.81</u>
 BOATING FUND		 JUNE 30, 1975
Amount Available for Commitment and Expenditure, July 1, 1974		\$2,138,885.72
Plus: Prior Year Adjustment—Cancellation of Prior Commitments		322,879.59
Adjusted Amount Available, July 1, 1974		\$2,461,765.31
Results of Operations—1974-75 Fiscal Year		
Total Revenue Received	\$2,030,023.60	
Less: Expenditures and Outstanding Commitments	1,643,489.42	
Net Operating Increase		386,534.18
Amount Available for Commitment and Expenditure, June 30, 1975		<u>\$2,848,299.49*</u>

*The amount available is broken down as follows:

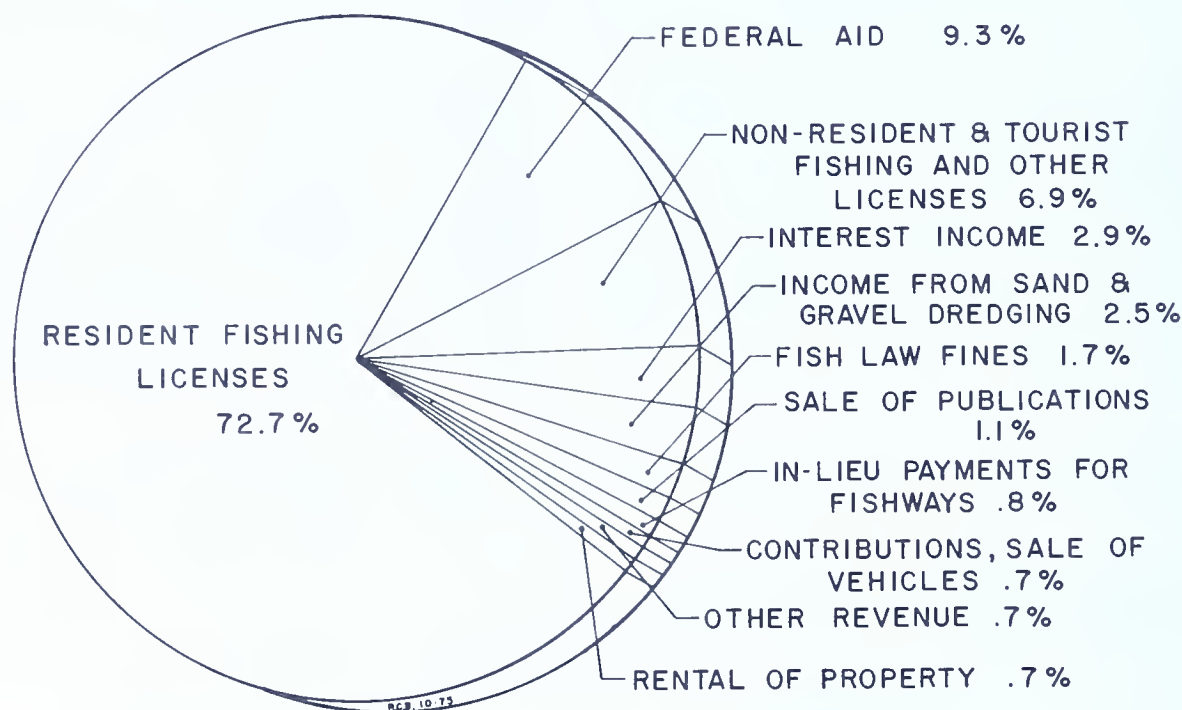
- (1) \$15,655.05 is reserved for operations of the Delaware River Navigation Commission.
- (2) The remaining \$2,832,644.44 is available for all other Boating Fund operations.

FISH FUND — REVENUE
July 1, 1974 to June 30, 1975

Resident Fishing Licenses—Regular	\$6,616,175.31
Resident Fishing Licenses—Senior	161,498.00
Non-Resident Fishing Licenses	505,692.25
Tourist Fishing Licenses	118,381.50
Federal Aid for Fish Restoration	804,447.76
Agnes Damage Evaluation Study	64,669.06
Interest on Securities and Deposits	270,555.22
Income from Sand & Gravel Dredging	228,405.79
Fish Law Fines	158,913.75
Pennsylvania Angler Subscriptions and Sale of Publications	99,973.89
In-Lieu Payments of Erection of Fishways	75,000.00
* Other Revenue	68,833.14
Rental of Fish Commission Property	60,956.56
Contributions for Restocking Streams	41,743.54
Sale of Used Vehicles	29,175.00
Other Licenses-Commercial Hatcheries, Private Lake Fishing Fees, etc.	21,005.00
TOTAL REVENUE	<u>\$9,325,425.77</u>

*Other Revenue consists of reimbursement and refunds of prior year transactions and Project 500 activities, right-of-way rentals, boat mooring permits, gas and oil royalties, etc.

FISH FUND REVENUE \$ 9,325,425.77



FISH FUND — EXPENDITURE & COMMITMENT BY DIVISION

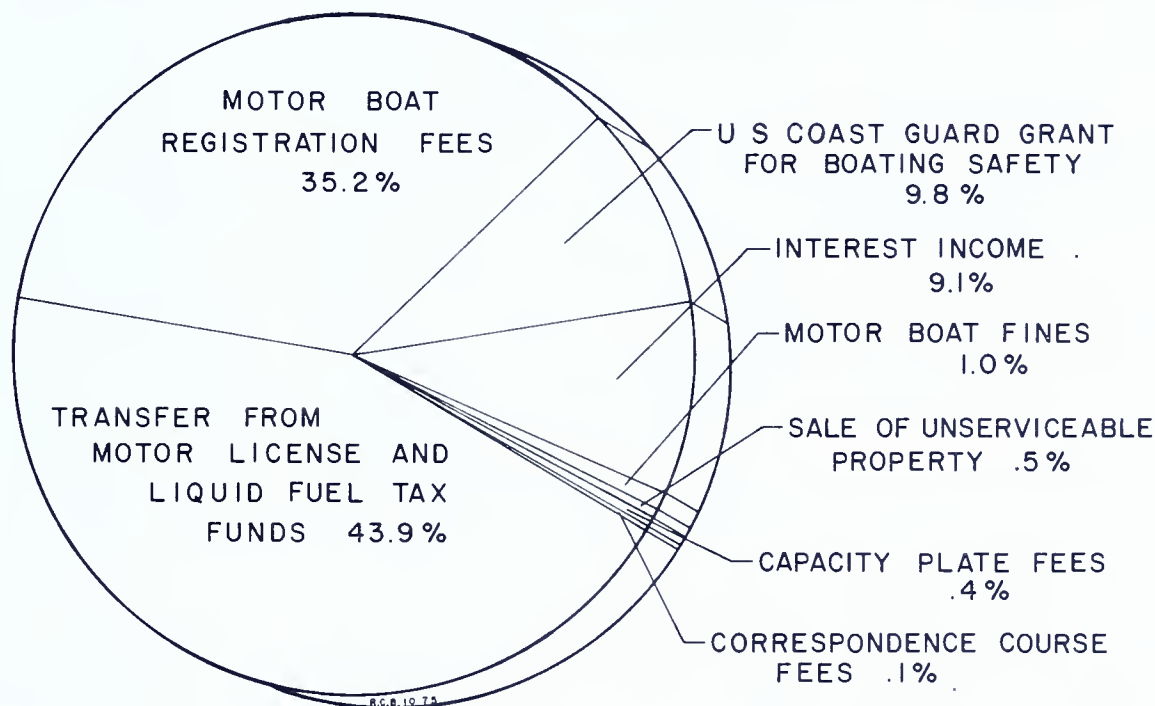
Executive Office	\$ 85,060.94
Comptroller Services	96,833.68
Administrative Services	658,935.55
Information & Education	373,327.86
Legal Services	18,368.80
Propagation	3,139,474.55
Fisheries Management	484,478.36
Research	265,003.20
Land and Water Acquisition	671,093.05
Engineering and Development	597,801.84
Environmental Services	54,434.10
Maintenance	354,854.34
Law Enforcement Services	1,490,501.32
Fish Fund—General Operations—Total	<u>\$8,290,167.59</u>
Dept. of Property & Supplies—G.S.A. Rentals	70,332.87
Treasury Dept.—Replacement Checks	1,000.00
TOTAL	<u>\$8,361,500.46</u>

BOATING FUND — REVENUE
July 1, 1974 to June 30, 1975

* Transfer from Motor License & Liquid Fuels Tax Funds	\$ 892,224.80
Motor Boat Registration Fees—Fish Commission	648,493.00
Motor Boat Registration Fees—Delaware River Navigation Comm.	65,823.00
U.S. Coast Guard Grant for Boating Safety Program	198,392.00
Interest on Securities	184,352.76
Motor Boat Fines	21,487.00
Sale of Unserviceable Property	9,932.50
Issuance of Capacity Plates for Boats	7,512.52
Fees from Sale of Boating Safety Correspondence Course	1,806.02
TOTAL REVENUE	<u>\$2,030,023.60</u>

*Act 65, Session of 1931, as amended March 12, 1957, provides for an annual transfer to the Boating Fund, the amount of the liquid fuels tax paid on liquid fuels consumed in the propulsion of motor boats on the waters of the Commonwealth.

BOATING FUND REVENUE \$ 2,030,023.60



BOATING FUND — EXPENDITURE & COMMITMENT BY DIVISION

Executive Office	\$ 17,179.68
Comptroller Services	23,257.97
Administrative Services	64,263.79
Boating Safety—Information & Education	32,975.15
Land & Water Acquisition	10,406.40
Legal Services	3,183.78
Engineering and Development	389,149.85
Maintenance	103,645.55
Law Enforcement Services	569,305.99
Boating Services	144,517.84
Boating Fund—General Operations—Total	<u>\$1,357,886.00</u>
Dept. of Transportation—Delaware River Nav. Comm.	99,961.24
Dept. of Property & Supplies—G.S.A. Rentals	1,984.86
Dept. of Revenue—Collecting Motorboat Registration Fees	182,657.32
Treasury Dept.—Replacement Checks	1,000.00
TOTAL	<u>\$1,643,489.42</u>

PENNSYLVANIA FISH COMMISSION
CLASSIFICATION OF EXPENDITURES & COMMITMENTS
(incurred July 1, 1974, to June 30, 1975)

	<i>Charged to FISH FUND</i>	<i>Charged to BOATING FUND</i>	<i>Combined Funds Expenditures & Commitments</i>
PERSONNEL COSTS:			
Salaries and Wages	\$4,166,928.41	\$ 538,940.32	\$ 4,705,868.73
Employee Benefits	790,560.18	103,964.42	894,524.60
Travel Expenses	99,191.65	24,965.14	124,156.79
Purchase of Uniforms, Clothing, Footwear	28,711.12	2,712.62	31,423.74
OPERATING EXPENSES:			
Fish Food	483,315.78	—	483,315.78
Printing	347,651.70	27,434.25	375,085.95
Payments to Other Funds and Payments to Other State Agencies for Services Rendered	317,018.39	32,670.78	349,689.17
Utilities (Heat, Water, Electricity)	269,568.76	4,157.23	273,725.99
Vehicle Maintenance-Gasoline, Oil, Repairs, etc.	210,862.87	46,004.39	256,867.26
Machinery and Equipment Repairs and Building Upkeep	147,003.16	21,139.58	168,142.74
Consulting Fees for Research, Land Appraisals, etc.	101,541.93	3,275.75	104,817.68
Rental of Buildings for Offices and Storage	65,466.78	23,847.52	89,314.30
Telephone	72,567.65	28,552.82	101,120.47
Maintenance of Fish Commission Buildings and Grounds	70,027.67	19,789.93	89,817.60
Other Supplies (Office, Laboratory, Recreational)	41,469.41	6,202.37	47,671.78
Maintenance and Rental of Office, Xerox, Tabulating Equipment	38,688.22	4,780.41	43,468.63
Postage	35,803.55	7,937.83	43,741.38
Automobile Liability Insurance	13,916.92	6,097.00	20,013.92
Grants to Outside Organizations for Research or Services	10,000.00	—	10,000.00
Purchase of Navigational Aids	—	14,956.94	14,956.94
CAPITAL INVESTMENTS (Purchases):			
Consideration Costs of Lands and Streams Acquired	438,014.00	—	438,014.00
Purchase of Passenger Vehicles and Trucks	345,629.19	82,199.72	427,828.91
Access Area Development and Improvement to Lakes and Streams	66,085.36	319,830.16	385,915.52
Machinery and Equipment for Fisheries Management and Hatchery Operations	58,923.71	—	58,923.71
Building Improvements to Existing Structures	50,050.23	12,871.00	62,921.23
Other Equipment—Research-Related, Construction, and Office	21,170.95	—	21,170.95
Purchase of Boats, Outboard Motors, Buoys	—	25,555.82	25,555.82
Pa. Fish Commission—General Operations—Total	\$8,290,167.59	\$1,357,886.00	\$ 9,648,053.59
General State Authority Rentals	70,332.87	1,984.86	72,317.73
Treasury Dept.—Replacement Checks	1,000.00	1,000.00	2,000.00
Collecting Motorboat Registration Fees	—	182,657.32	182,657.32
Delaware River Navigation Commission	—	99,961.24	99,961.24
TOTALS	<u>\$8,361,500.46</u>	<u>\$1,643,489.42</u>	<u>\$10,004,989.88</u>

Book Review -

We seldom do book reviews . . . for two reasons: first, we can scarcely find the time; the second will become apparent as we go along.

"**Cooking Fish And Game**," by Francine Dufresne is one of the first really unique works worth reading to come down the pike in a while. You can pick it up in paperback for a nickel less than a fiver (three bucks more for hardcover) which is fortunate because it's going to cost you an arm and a leg just for the garlic if you go through the cookbook but once and try your hand at each of Francine's exotic offerings of the otherwise commonplace.

One of the first women to be a member of the Outdoor Writers of Canada, she has published two books in French on the subject; this is a translation of the second. Simply reading a cookbook is seldom fun but this is an exception. Francine's spirited, imaginative writing makes it more than just a potpourri of recipes. She becomes personally involved; for instance: "Baked Fish With *Leopoldine* Butter," "Haddock *Leopoldine*," and "Mackerel *Leopoldine*." We quote her preface to the latter:

"I've named this dish and many others 'Leopoldine' after myself. Francine is my working name, but Leopoldine is my feminine name. I use it when I cook, paint and make love." (sic)

While we certainly have no quarrel with one's prerogative to be called what one will, we do question the probability of one doing all three well — *simultaneously* as the coordinating conjunction "and" would indicate. Conceivably, one could, in the order of their appearance: 1) burn, or at least grossly overcook, one's favorite dish, 2) misapply one's ochers and umbers, or 3) fail miserably. But, enough semantics — back to the oven.

For the angler, Francine features such delights as "Garlic Bass" which, good judgement would dictate, is hardly the dish to eat just before going

to the theater, unless crowds bother you. No doubt the 5 or 6 cloves of garlic suggested in the recipe will whisk away the "muddy" taste some attribute to the bass.

"*Speckled Trout On A Bed Of Baked Beans*," sounds like a real gasser! "*Sunfish With Almonds*," "*Yellow Pickerel Glazed With Honey*," and "*Perch With Dandelions*" all have a nice ring to them and we'll bet a buck you'll be the first on your block to serve them! In "*Potatoes Stuffed With Sardines*," Francine allows for the substitution of bullheads, sunfish, bass, etc., for the sardines. It follows that you'll need either small bullheads or exceptionally large potatoes. The foregoing is but a sampling of fish dishes for which an ample assortment of sauces is also provided.

Turning to the cooking of the hunter's bag, Francine eases up on the garlic slightly (but only slightly), turns to some rather potent marinades, then begins flambéing with a passion certain to put the local fire department on standby alert, using an assortment of flammable spirits dear to the hearts of not a few of my colleagues: *Cognac, Cointreau, Gin, Grand Marnier, Scotch, and Vodka!*

Doubtless few of m'friends ha' ever set torch to that much booze . . . doubtless few ever will!

Not suggested in her book, but proffered here: alert your neighbors that an occasional kitchen aflame is not to be considered unusual. Too, request they refrain from alerting the local gendarmerie at the first sniff of a heady vapor. "*Tis not a still ye smell, O'Toole*," y'll say, "*Tis me French cookin — that it tis!*"

Unquestionably you could substitute grouse in "*Partridge With Green Grapes*" — we sincerely hope so. Too, for "*Lac Saint-Pierre Black Duck With Peaches*," you could probably get away with your average everyday beaver dam duck . . . no use driving so far . . . and if your aim is deadly, "*Leftover Duck Salad With Tangerines*" is just for you! "*Teal With Damson Plums on Watercress*" might present some problems . . . beats me whether or not all are available at the same time or not. The recipe stipulates that *only the plums are stoned*; so, use the gin to flambé as specified.

"*The Old Hunter's Marinated Goose*" gives rise to speculation: was the hunter *old* before he began? Or, did he become so as he whiled away the hours as the goose lay marinating in the red wine, olive oil and all the other goodies? And, who of you out there will set fire to enough Cognac to flambé an entire goose? Methinks there are those who would rather down the fluid and breathe heavily over the carcass with a fiery breath instead!

How does "*Beaver Stew Saint-Tropez*" grab you? How do you think the beaver feels about soaking for two weeks in red wine, shallots, rosemary, olive oil and again as many other ingredients? Then there's "*Muskrat With Cherries*," the dish that pays for itself! You sell the pelt, get enough money to pay for both the trap and the cherries, and dinner's on the house! "*Spaghetti And Moose Meat*" sounds like just the ticket for a Pittsburgh caterer who just booked a dozen Italian weddings; but, really, the proportions are quite reasonable. On "*Cabbage Leaves Stuffed With Moose Meat*," now, I've grown some big heads of the stuff, but you'll need a beaut to pull this one off!

Again, we've touched on but a few of the game recipes. We'd be remiss, however, if we failed to mention "*Leg Of Bear Castel Du Roy*," everyone's favorite! They're all in the book plus, as with the fish recipes, some of Francine's favorite sauces. One, "*Piquant Vercheres Sauce For Roasts*," really fascinates me. Listed among the ingredients: "1 entire head of garlic cloves." Quoting Francine, "*Don't be afraid to use the entire head or bulb of garlic; it's the secret of the sauce*." Francine, your secret is safe with me!

In summary, it should be obvious that this is not your everyday " . . . take one pound of ground beef" type of cookbook. If a genuine culinary adventure is what you seek, this is where it's at.

And now you know why we seldom do book reviews!

Jim Yoder

(Cooking Fish And Game, 144 pages, profusely illustrated with old wildlife etchings, is distributed by Charles Scribner's Sons, New York. It is not available from the Pennsylvania Fish Commission.)



Isonychia harperi: the male dun.

FLY TYING

The Leadwing Duns

by Chauncy K. Lively
photos by the author

The big mayflies of the genus *Isonychia* are interesting creatures, impressive in appearance, and unusual in lifestyle. The nymphs are strong, facile swimmers with uncommon mobility in fast water. Their forelegs are fringed with long hairs, resembling brushes, with which they are able to gather food particles brought them by the currents. *Isonychia* nymphs are said to be carnivorous on occasion and it's easy to see how smaller, less agile larvae could fall prey to these fleet predators.

Isonychia's usual mode of emergence is similar to that of stone flies. The mature nymphs crawl out of the water onto exposed boulders, logs or other convenient objects protruding above the surface, where the winged subimagos emerge and fly away, leaving their empty nymph cases as voided launching pads. But there are times when high water submerges their points of exit to the outside world and the nymphs are forced to make their way to the surface and emerge in the manner of most mayflies. Their swimming ability enables them to accomplish this emergency measure with apparently no ill effect.

Four *Isonychia* species most common in the East are: *I. albomanicata*, *I. bicolor*, *I. harperi* and *I. sadleri*. Charles Wetzel named the female imago of *I. albomanicata* "White

Gloved Howdy" because of the white tarsi of its forelegs. *I. bicolor* is perhaps Pennsylvania's most prevalent species and it is often referred to as the "LEADWING DRAKE" because of the drab gray coloration of the subimago's wings. But the four species share sufficient likenesses in the dun stage to qualify a single dry fly pattern in #10 and #12, the main differences being in size.

Theoretically, it would appear that by virtue of the nymph's penchant for crawling out of the water to emerge, *Isonychia* duns would not present many opportunities for the dry fly. Of course, every dry fly angler knows better. On windy days duns are blown fluttering and skittering onto the water. But even more significant is

several of the duns flew in a downward slanting course until they crash-landed on the water. Of perhaps a dozen duns I watched emerge, fully half descended to the water and disappeared around a bend below me, still frantically trying to break the grip of surface tension. It was an incredible display of flying ineptitude by winged insects and I wondered how they could perpetuate their species at that rate.

The LEADWING DUN pattern is a dry fly representing the *Isonychia* species prevalent in Pennsylvania's trout streams. It is dressed open-palmer style with a broad "V" clipped out of the hackle's underside. The hackling runs from front to rear, flaring the barbles to conform with the position of the insect's legs. This



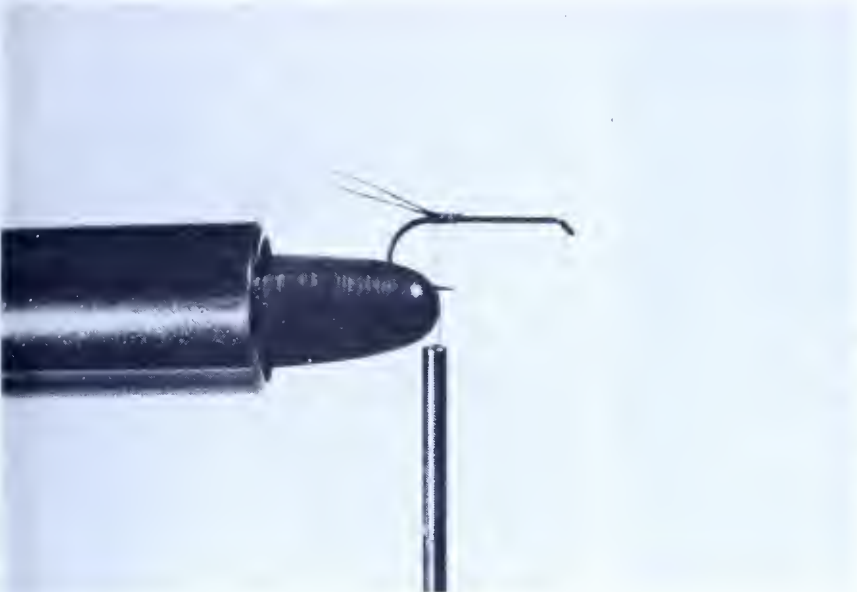
Dave Henderson reaches for a rise on Slippery Rock Creek.

their apparent lack of direction and clumsiness in flight, quite unlike the graceful, fast flying *Isonychia* spinners.

Once, when I was fishing near a bridge I had an opportunity to watch, at close hand, the emergence of several *Isonychia harperi* duns. A nymph would crawl up the stone abutment to a few inches above the water line, where it remained perfectly still for a few seconds. Then the thorax would split open, unfurling the dark wings, and soon the whole mayfly was standing free of the nymphal shuck. Several duns seemed to have difficulty extricating their tails, losing one or both in the process. After a time the dun would tentatively beat its wings a few times and then take off. Next, instead of flying upwards like most mayflies,

assures correct posture on the water and preserves balance without requiring tail support. The wings are cut from dark dun hen hackles or from the small shoulder feathers of coot wings. Shaping of the wings may be accomplished with scissors, toenail clippers (Jorgensen method) or a wing cutter. Body dubbing may be of any brownish fur mixed with a little red angora to achieve a rusty hue.

To insure maximum flotation of a fly as large as the LEADWING DUN, a hook of fine wire should be used and the Mustad #94833 (3X fine) is ideal. If you have found this hook too soft in small sizes for your taste, don't hesitate to try it in large sizes. The fineness of the wire is relative to the hook size and in #12 and #10 it is quite sturdy.



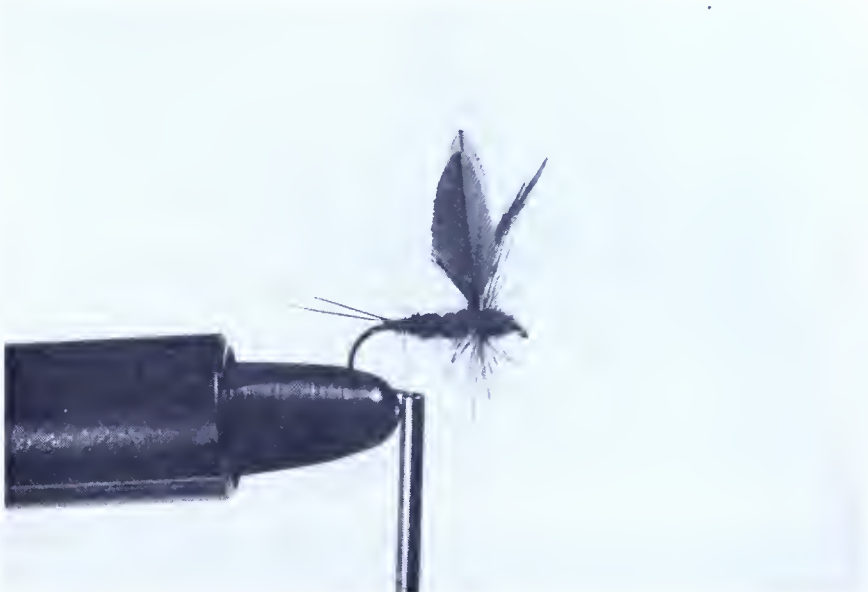
Clamp a fine-wire, size #10 or #12 hook in vise and bind brown tying thread at bend, above left. For tails tie in two straight black bear hairs. Then, cut wings to shape from two dark dun hackles or from a matched pair of coot shoulder feathers, above right. Wing length should be equal to overall length of hook, including eye and bend. If stems are straight, hold wings back to



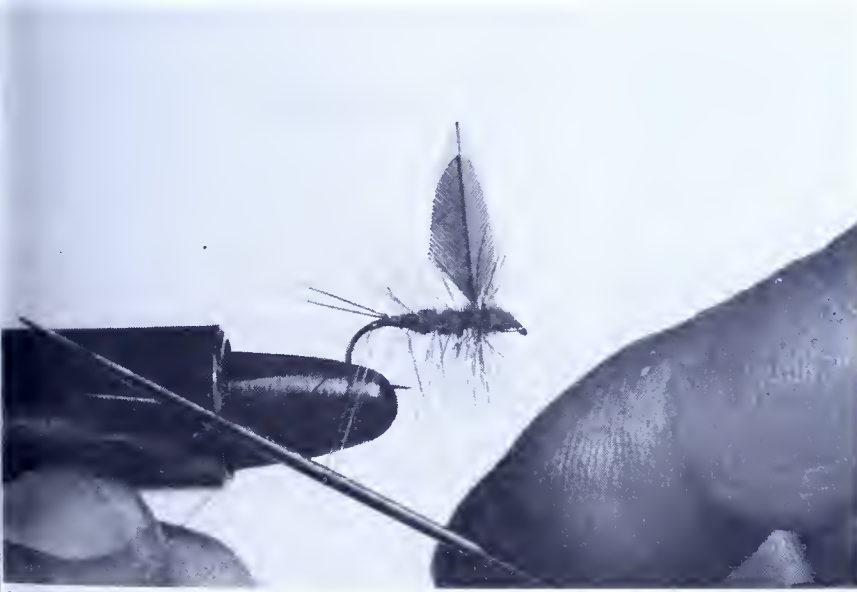
back and bend stems forward at right angle with tweezers. Then set wings in upright position and bind bent stems atop shank. If stems are curved, hold wings upright with stems straddling shank and secure with figure 8 turns. Then bend stems along shank and bind. Apply a drop of hard-drying cement (Duco, Ambroid, etc.) at base of wings and trim excess stems.



Above, left: Select one each brown and medium dun hackles with barbule length about $1\frac{1}{2}$ times hook gap. Tie in the dun hackle behind wings, on edge and at right angle to shank, with glossy side facing eye. Similarly, tie in brown hackle in front of wings but with glossy side facing bend. Then, wind brown



hackle forward two or three close turns and tie off, above right. Wind thread to eye and apply a dubbing of reddish-brown fur or synthetic. Wind dubbing back to brown hackle, then pass dubbed thread beneath the wound hackle and continue to bend, forming tapered body.



Now wind dun hackle toward bend in spaced turns, open-palmer style, above left, and tie off at bend. Whip-finish around bend beneath base of tails, as shown, and trim thread. Apply head lacquer to finish windings. After trim-



ming a wide "V" from the underside of the hackle the finished Leadwing Dun should look like this, above right.



A Special "Pen" for the Fly Fisherman

by Loring D. Wilson

How often have you stood in the gathering dusk and fumbled with benumbed fingers to hold a #18 fly in one hand while you threaded a tippet through the eye with the other? How many times have you wished that you had a small vise along so that you could whip up a pattern that would match the insects on the water? Too often? How would you like to invest 39¢ and a few minutes work in a tool that would solve all your problems?

The tool is quite simple, and the only components required are a cheap, click-type ballpoint pen and a length of relatively fine copper wire, which can readily be cannibalized from a discarded electric cord. The process of making the tool is also quite simple, and proceeds as follows:

First, remove the refill from the ballpoint pen, and slide the spring off the end of the refill. Then take a pair of pliers, grasp the point of the pen, and twist it out. Now take a pipe

cleaner, and run it through the refill to push out the ink. You may need to use several pipe cleaners to remove all traces of ink from the inside of the refill.

Lay the cleaned refill on a piece of scrap lumber. Most refills are approximately $3\frac{7}{8}$ " in length, but you don't have to worry if the refill is a little longer or shorter. Simply measure $2\frac{1}{2}$ " from the point end (there should be a little crimp in the plastic refill near the point end to keep the spring from sliding up the refill), and at that point, make a small "V" cut through the plastic, so that a small section can be removed (see illustration).

Now take a 6" section of copper wire and bend it in half, but only moderately tightly, so that a narrow loop is formed in the center of the wire. Take the two free ends of the wire loop and insert them in the point end of the pen refill, shoving them up through the refill until they reach the "V" shaped cut. With a pair of tweezers, grasp the ends and pull them out through the cut.

Continue to pull them until a loop only $\frac{3}{16}$ " long extends from the point end of the refill. Now take the free ends and wrap them firmly around the body of the refill within the cut, so that the wire is firmly affixed and can slide

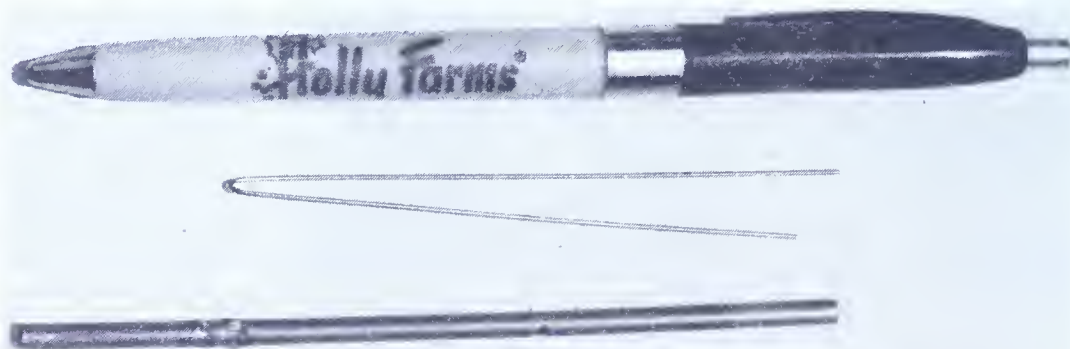
neither up nor down. Replace the spring, and reinstall the refill in the body of the pen.

When you click the pen, the loop will protrude through the hole in the end of the pen, and the point of the hook can be inserted through the loop. Click the pen again, and the loop withdraws, holding the fly tightly against the nose of the pen. Now you can hold onto the pen while you thread the tippet through the eye of the hook instead of taking changes on mashing the wings and hackles of the fly. This is especially important on the smaller flies, and the fly fisherman's pen enables you to affix #'s 26 and 28 with the same relative ease as #'s 8 and 10.

To turn the pen into a miniature vise, make the addition of a very small slot cut into the nose of the pen, and work the hook bend into the slot. The slot will keep the hook from turning while you perform the tying operations. Incidentally, the fly fisherman's pen makes an excellent midge vise at all times. It can be held in a regular woodworking vise for greater freedom of both hands, or a special table mount can be built for it. The weak spring of the pen holds the hook securely but does not apply enough pressure to crack the fine tempered wire of the smallest hooks.



First step is to cut notch in refill, above left. Then, insert wire loop to proper length and wrap, photos above right. All components are shown below.



Build your own Battery Caddy

by Arthur Glowka

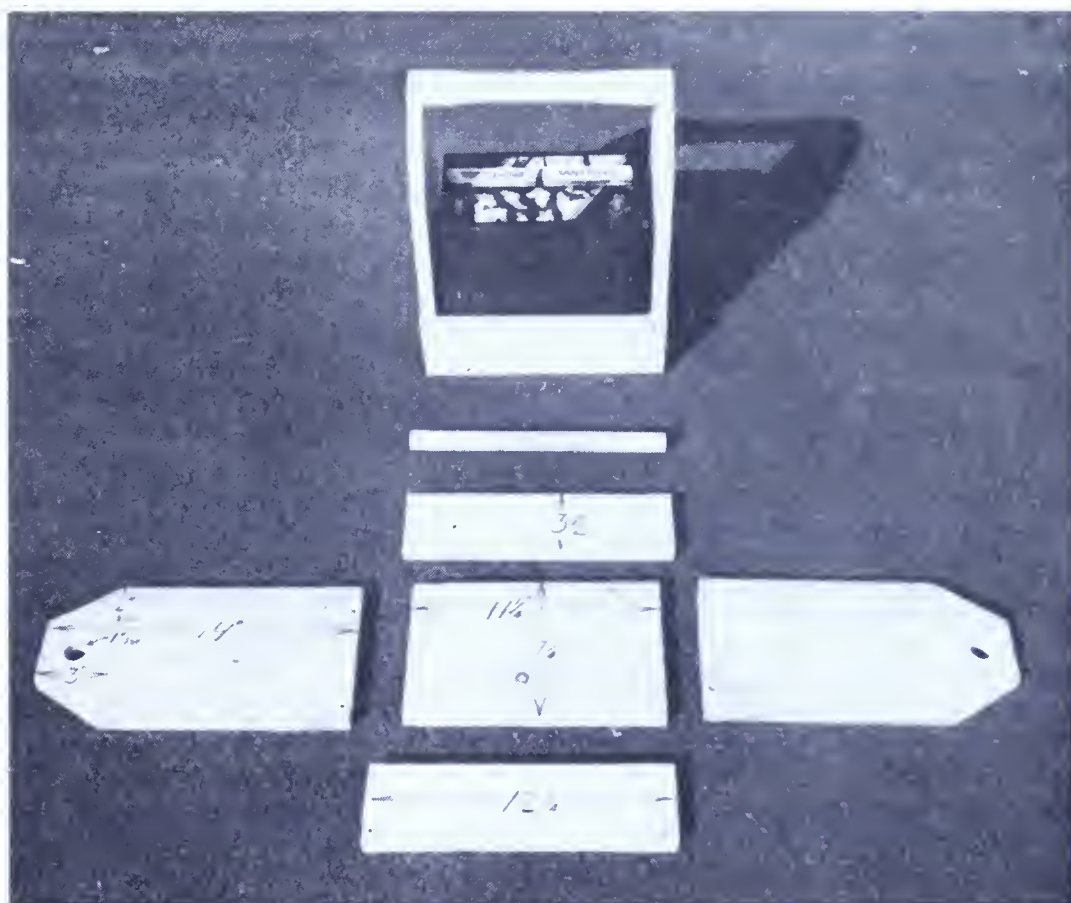
Large lead acid batteries are becoming an important adjunct to the fishermen and boaters of the Keystone State. With our many "Electric-Motors-Only" lakes, many who use electric trolling motors own at least two batteries, keeping one on charge while they fish with the other. Then, too, larger outboard motors can only be started electrically, just like inboards. A spare battery on board adds a measure of assurance for starting either, should the prime power source run down as it might well do if considerable trolling is done.

Good lead acid batteries are heavy and expensive but if they are not abused, they can supply a dependable source of power under an extreme range of field conditions — even to providing power for camper's auxiliary lanterns. But, being heavy, they are hard to carry around — especially when they become wet and greasy. And if dropped, or pounded about in a boat, the plastic case can crack and all the electrolyte will leak out.

Older batteries could be carried with a strap which was attached to the diagonally positioned terminals. Modern batteries now have both on the same side rendering the old "strap handles" obsolete.

A quick, safe, and convenient battery caddy can be fashioned after one of the old carpenter's tool boxes with a few cents' worth of lumber and a half hour's effort. The accompanying photos show how it's done.

Since all the newer lead acid batteries are made in a standard 6 $\frac{3}{4}$ " width, "one-by-eight" lumber, which actually measures 7 $\frac{1}{4}$ " wide, works nicely for both the base and ends. Ripped to half that width, it also provides sides of adequate height. The caddy is assembled with #10-2" wood screws and either a dowel or a flat piece of lumber can be used as a handle; both styles are illustrated.



"CATCH 466" — a book review

ARE YOU A BYBB? (backyard boat builder)

by Alan MacKay

Marine Services Specialist

DEPARTMENT OF TRANSPORTATION



COAST GUARD

safety standards for backyard boat builders



CG - 466

"If you are, this booklet is written to show you how to use safely the boat you have spent so much time and money building. After all, your boat was probably built for fun and relaxation, and the last thing in the world you want is trouble. Drownings are so final!"

The preceding bit of hoopla was excerpted from a recent Coast Guard Boating Safety newsletter, announcing the arrival of a new publication, *"Safety Standards for the Backyard Builder."*

It used to be that the biggest problem the home boat builder had was getting the thing out of the cellar once he'd finished it, but not anymore. Most folks are aware of the provisions of the Federal Safe Boating Act of 1971 — that was the legislation that was responsible for all those labels that get stuck all over your boat when it comes out of the factory. Basically, under the provisions of FBSA 71, a manufacturer attaches a certification label, stating that he has complied with all of the federal safety standards in effect at the time construction was begun on that hull. He also affixed a 12-digit Hull Identification Number that identifies the month and year of manufacture. The boat manufacturers hollered a bit until some of the bugs were ironed out of the system, but as far as the consumer was concerned this whole thing made sense. The buyer was apprised of the flotation built into the hull, had a capacity plate to provide guidance as to the safe loading and powering of the boat he wished to purchase, and had a permanent number for identification.

A minor hitch developed in the system when somebody noticed that the term "manufacturer" was a bit loosely defined and might be interpreted to include the guy who puts together a little skiff in his backyard. "Naw, they couldn't mean him," everybody assumed; but, just to be sure, Pennsylvania sent an inquiry to the Coast Guard. For FOUR YEARS Pennsylvania sent inquiries to the Coast Guard. Finally, the answer arrived, in the form of CG 466. Yes, in fact, the backyard builder WAS included under the provisions of FBSA 71, but only if he sells his boat.

In other words, if you built a boat in 1973 and now decide to sell it, you must certify that you complied with federal standards that were in effect in 1973 . . . whatever they were. Not only must you so certify, but your certification must be attached permanently to the boat. But when you built the boat you had no intentions at that time of selling it, so you didn't comply with the standards. (You might have if you knew there were any, but you didn't).

The immediate question that comes to mind is, "How come it's so gosh awful important for the *second* owner to have all of this information, when it's not important that the *first* and possibly the *only* owner know it?" I posed this question to my friend who used to be at CGHQ, Lt. Yessirian.

"Because," said Lt. Yessirian.

I then asked if he knew who authored CG 466.

"I don't remember his name," he replied, "but he's a real Heller ain't he?" Lt. Yessirian isn't with the Coast Guard any more; he's selling advertising space on Government labels. "Tremendous untapped market there . . . great potential."

Thinking about building a boat? Better order a copy of the booklet. Already built it? Tough luck, fella, but better get yourself a copy anyway. They're available from the Coast Guard, or if you wish, from us — we have a couple cases stuck away in a dark corner of the cellar. Once you've digested the contents we'll do our best to help find an answer to the questions that are sure to be raised.

Ashore & Afloat

by Gene Winters

“Unsafe at any speed . . . even when standing still!” (How’s that for going Ralph Nader one better?) Fortunately, boats apparently have fewer manufacturing defects than autos but still enough for the Coast Guard to initiate a modified “recall” program. Tough new federal standards are quickly forcing the few shoddy builders to shape up or fold up.

You need not, however, be a safety consultant to realize that most problems in boating that endanger property and life are caused by *operator negligence or ignorance!* You might, however, be amazed how many fires and explosions, accidents and drownings, capsizings and injuries take place right at dockside or within 100 feet. **I, personally, am firmly convinced education is the key to solving many of these problems.** Education is the key to the knowledge you can (and might have to) bet your life on!

Knowledge is having sufficient approved personal flotation devices on board, in good condition and knowing where they are (and when and how to don them). Plotting a fire-safe cruise any time you shove off should be automatic. **Enforce rigidly the “No Smoking” rule when refueling;** and, wipe up all spills immediately, stowing all rags in a metal container with a lid. Refuel portable tanks only on the dock or ashore. Never keep reserve fuel in engine or living compartments. Keep matches away from children. Turn off all electrical devices. Better yet, disembark all unneeded passengers when refueling. Sniff around with your nose and if no strong smell of gas, *still* run the bilge blower (if you have one) for at least five minutes before you start the engine. Use only marine approved stoves; no portable gasoline or LP stoves, please. Carry at least the required number of approved and ser-



Safety line should be in or near operator's hand in case winch line snaps.

viceable fire extinguishers and make sure all on board know where they are and how to use them.

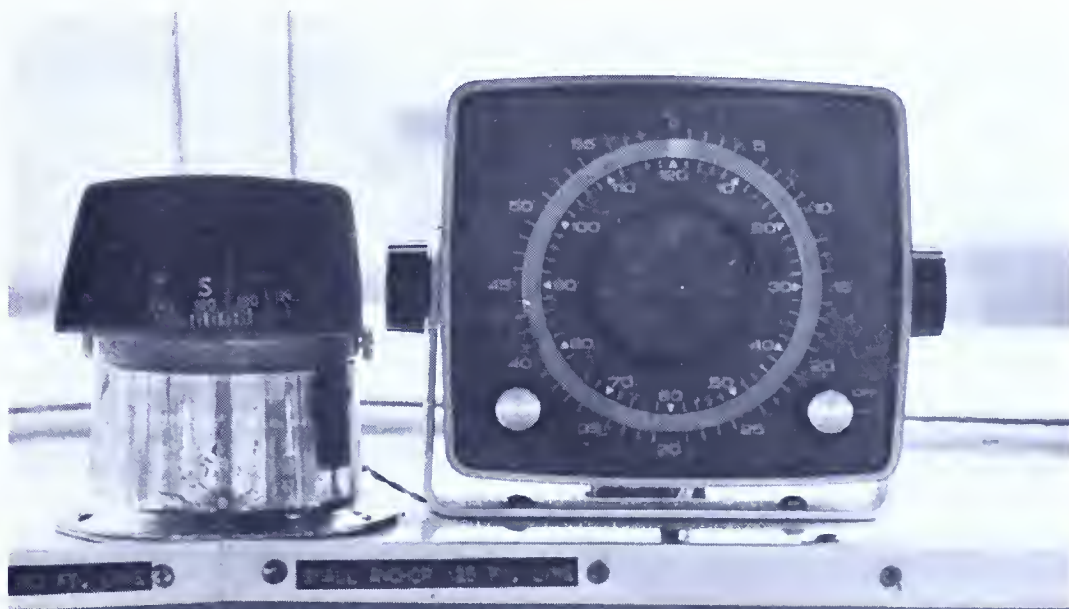
Learn at least the basics of weather and carry a pocket radio for forecast updates. Carry at least one anchor, rigged and ready to use. Use a boathook instead of an outstretched arm to shove off or fend off when docking. Add a compass and know how to use it when the weather closes in. Have a towline on board. Running at night? Check the navigational lights *before* you go out. Carry spare bulbs, batteries, a flashlight or lantern and some day/night distress flares. Large water boaters should add a marine radiotelephone for emergencies. Know how your boat handles and responds under various conditions of trim, wind and water. *Never* exceed the capacity plate rating (which is intended for

normal conditions).

Make sure your shore practices are equally safe. Tow vehicle in good condition, hitch secure and trailer firmly coupled. Use and frequently check trailer safety chains (crisscross them!), tie downs, wheel bearings and tires. When using the winch, tie a safety line to the boat. Periodically unwind the winch line completely and inspect its condition.

A lot to learn and know? Shucks, I've just touched the surface. If you really want to earn the title of “Skipper” or “Captain,” enroll in one of the many free safe boating courses available to the public. Then, when you hit the water this spring, your boat can be safe at any speed . . . even when standing still. All it probably needed all along was a competent, educated boater at the helm!

A compass can guide you back to port should the weather suddenly turn foul.



CO-OP NEWS

by Bill Porter

The Mount Holly Fish and Game Association, Cumberland County, gets its place in the sun this issue and that is not exactly a cliché. The club's nursery has been plagued many times over its seven-year history with high water, and at the time of our visit for this article, it was probably getting ready for another siege whether it needed it or not. The occasion was the second day of the steady rain in the area that within another 48 hours was to produce the "Flood of 1975."

And this leads to a bit of past history, the club had experienced severe high water in 1970, again in 1972 with Agnes, and the fall rains of 1975 would carve another notch on the club property. There were other minor floodings from time to time just to keep the nursery committee members on their toes. In most cases, damage was minimal and fish loss well below what would be expected for the degree of the problem.

Credit goes to the Mount Holly sportsmen for the concern they put into their initial construction and accepting advice from the Cooperative Nursery Program when it seemed needed and asked for. A case in point would be the sturdy screening firmly attached to the ground-level raceways. Water flowed over them but did not wash them away. By the same token, much structural damage was avoided to the block wall construction by having those walls protected by the very ground that surrounded them. The point is that the club survived and is doing well at the moment.

Going back to the screens for just a moment, a bit of a paradox developed over their use. Normally, nursery operators use screens for protection against a variety of predators — and Holly had its share. But in this case, the screening was more important as a retaining device for the fish than a protector of them. After Agnes, for example, when the waters dropped, most of the trout were right where



Mount Holly F & G club stocks Mountain Creek with these float boxes, above. From past experience with high water, club members chose to build meeting house "high and dry" as shown in the photo, right.

they belonged ready for some more "tender loving care" from the Mount Holly sportsmen. The flood had neither destroyed them nor liberated them before they were of a proper size.

In other matters, the club is currently producing about 6,000 legal trout a year and carrying about 400 holdovers to sprinkle in with the yearlings at stocking times. Brook trout are part of the mixed bag this year. It is a first for the club and the members are working on an experimental group of about 1,000. If all goes well, there will be 2,000 brookies in residence next year. The remaining population is about equally divided between browns and rainbows.

Brad Fahnestock, new nursery manager this year, explained the club's stocking procedures. Mountain Creek receives all of the trout. The fish are spread along its length, roughly from Laurel Lake to its mouth at the Yellow Breeches. Four in-season plantings are done usually early in the spring season. A children's derby occurs later in the year with a portion of Mountain Creek being used for the event.

And staying with the trout for a bit longer, Brad indicated that a successful rotating feeding schedule has been established by the nursery committee. There are about ten members on the feeding cycle with the fish receiving food twice a day. Two men handle the chores for a month and work out the morning or evening feeding as matches their work schedules. So far, so good and the condition of the young trout would seem to prove the success



of the pattern.

Two projects are currently in the works to add to and improve existing facilities at the nursery. One is the building of a "people" building with Fahnestock explaining the use of the word *people*. The new structure will house the committee members on a work party, will permit meetings of the group and a place to develop and maintain the necessary paper work to keep the operation alive and well. Needless to say, the construction has set the floor several feet above ground level with an eye to future high water periods.

The other project is to further develop the Spring House, currently holding the larger trout. There is a bit of a nitrogen problem, but that can be licked with aeration, subdivision and other adjustments. The site has excellent extension possibilities for the nursery. Again, the impounded springs will have a use; they had served the upper end of Holly as a water supply as well as the paper mill below them in earlier years of service.

Then it was time for some credits and the visit was over. Brad felt the help of Phil Avery, an Eaton Dikeman Paper Mill administrator, was of particular value as was that of the total company. Charles Nickel's services as the original nursery manager were invaluable. Joe and Steve Shank could not be left unmentioned and the list continued with all making the Edmont (for the paper company) Nursery, Mount Holly Fish and Game Club, an effective influence on trout fishing in their area.

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Full Color Wall Charts by Staff Artist Tom Duran



TURTLES of Pennsylvania



Tom Duran Jr.

LIZARDS AND SKINKS

Along with turtles and snakes, lizards are included in the broad class known as Reptiles. The four species found in Pennsylvania are shown here.

Common Name	Scientific Name	Adult Size
1. Northern Coal Skink	<i>Eumeces anthracinus anthracinus</i>	5" - 7"
2. Five-lined Skink	<i>Eumeces fasciatus</i>	5" - 7 1/2"
3. Northern Fence Lizard	<i>Sceloporus undulatus hyacinthinus</i>	4" - 7 1/2"
4. Broad-headed Skink	<i>Eumeces laticeps</i>	6 1/2" - 12 1/4"

TURTLES

(Measurements are straight line length of upper shell)

Common Name	Scientific Name	Adult Size
5. Spotted	<i>Clemmys guttata</i>	3 1/2" - 4 1/2"
6. Eastern Box	<i>Terrapene carolina carolina</i>	4 1/2" - 6"
7. Blanding's	<i>Emydoidea blandingi</i>	5" - 7 1/2"
8. Striped	<i>Stemomachus odoratus</i>	3 1/2" - 4 1/2"
9. Wood	<i>Clemmys insculpta</i>	5 1/2" - 7 1/2"

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SNAKES of Pennsylvania



(ACTUAL SIZE 17" X 22")



POISONOUS SPECIES

Common Name	Scientific Name	Adult Size
1. Northern Copperhead	<i>Agkistrodon contortrix mokasen</i>	24" - 36"
2. Eastern Massasauga	<i>Sistrurus catenatus catenatus</i>	20" - 30"
3. Timber Rattlesnake (yellow phase)	<i>Crotalus horridus</i>	36" - 54"
4. Timber Rattlesnake (black phase)	<i>Crotalus horridus</i>	36" - 54"

NON-POISONOUS SPECIES

Common Name	Scientific Name	Adult Size
5. Northern Red-bellied	<i>Storeria occipitomaculata</i>	8" - 10"
6. Eastern Garter	<i>Thamnophis sirtalis sirtalis</i>	18" - 26"

NON-POISONOUS SPECIES (continued)

Common Name	Scientific Name	Adult Size
7. Short-headed Garter	<i>Thamnophis brachystoma</i>	14" - 18"
8. Northern Brown	<i>Storeria dekayi dekayi</i>	9" - 13"
9. Eastern Kingsnake	<i>Lampropeltis getulus getulus</i>	36" - 48"
10. Eastern Ribbon	<i>Thamnophis sirtalis sirtalis</i>	18" - 26"
11. Black Rat, with young	<i>Elaphe obsoleta obsoleta</i>	42" - 72"
12. Eastern Worm	<i>Carphophis amoenus amoenus</i>	7" - 11"
13. Eastern Mole	<i>Lampropeltis triangulum triangulum</i>	24" - 36"
14. Northern Black Racer	<i>Coluber constrictor constrictor</i>	36" - 60"
15. Northern Ringneck	<i>Diadophis amabilis edwardsi</i>	10" - 15"

NON-POISONOUS SPECIES (continued)

Common Name	Scientific Name	Adult Size
16. Eastern Hognose	<i>Heterodon platyrhinos</i>	18" - 30"
17. Queen	<i>Regina septemvittata</i>	15" - 24"
18. Northern Water	<i>Natrix aspidon aspidon</i>	24" - 42"
19. Kirtland's	<i>Crotaphytus kirtlandi</i>	14" - 16"
20. Mountain Smooth Earth	<i>Virginia valeriae pulchra</i>	7" - 10"
21. Rough Green	<i>Ophiodon aspidus</i>	22" - 32"
22. Eastern Smooth Green	<i>Ophiodon vernalis vernalis</i>	14" - 20"

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COST vs. BENEFIT

Under the Federal Water Pollution Control Act amendments of 1972, worthwhile goals were set which we believe to be necessary not only for the future of fishing, swimming and boating recreation for the citizens of this country, but in the best interests of everyone in the long run, citizens and industry alike.

The National Commission on Water Quality has issued another draft of its staff report and scheduled hearings to provide interested members of the public an opportunity to comment. At one of the public hearings we will be introducing our comments to strengthen the report environmentally and to counterbalance comments from industry.

Two main issues which will be the center of any contention are: (1) whether the National Commission adequately assessed the economic costs and benefits of meeting the Act's requirements; and, (2) whether meeting the "Best Practicable Technology" (BPT) standards will be sufficient to achieve the 1983 goal.

To keep the original goals of the Act, we believe, is an absolute necessity. The 1983 goal of the Act is that all waters of the United States be restored to — and maintained at — fishable, swimmable quality, using the "Best Available Technology" (BAT).

Industry contends that the Commission overestimated the benefits and underestimated the costs of meeting the Act's requirements; and, they also claim that using the "Best Practicable Technology" (BPT) will be sufficient to achieve the 1983 goal of fishable, swimmable waters. We doubt that.

We believe very strongly that any industries which discharge need hard firm deadlines and that the 1977 and 1983 deadlines should be retained. Otherwise, we will be moving backwards. Attempts are being made continually to erode these deadlines at both state and federal levels; to substitute "BPT" for "BAT" in the 1983 goals would result in but roughly half of the studied waters being fishable. Furthermore, "BPT" requirements would not be sufficient to accommodate pollution from future growth.

Based on the Commission's report, we do not believe that there will be any significant negative economic impact from retaining the "BAT" requirement. We also believe that it will cost less in the long run for industry to meet "BAT" — after achieving "BPT" — than to meet "BPT" in the first instance by 1977.

Although we are talking about all of the waters of the United States, we hope that as far as Pennsylvania is concerned there will not be any degradation of the excellent water quality standards already adopted here.

We need backing from a citizenry which has overwhelmingly indicated its desire to clean up the waters of the United States . . . a citizenry which should, by this time, be fed up with the tactics of those same dischargers who have been responsible for so grossly polluting our streams throughout most of this century and who now have to be dragged kicking and screaming into compliance with water quality standards established in the best interests of all.



Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

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CONTENTS

'Possum Lake Muskies by Bill Porter	8
The Pioneer Tannery by Wilbert Nathan Savage	10
Ice Fishing Clinic - an <i>Angler</i> PHOTO FEATURE	18
Real Cool Fun - a day on the ice for the handicapped	20
Old Patrol Boats Never Die by Alan MacKay	28
The Hatch by Richard L. Henry	32

The Covers: Staff Photographer Russell Gettig records typically wintry Keystone State scenes on both front and back covers this month. Mr. G. W. Cowfer, of Renova, is shown in a rather contemplative mood against an attractive background of icicles while fishing on Alvin Bush Dam last year. Most of our lakes will have a cover of ice into March but our warmer spring-fed streams (back cover) will elude Old Man Winter's icy grip and remain open all winter long.

MONTHLY COLUMNS

FISHING OUTLOOK	2	ANGLER'S NOTEBOOK	23
LEAKY BOOTS	4	STREAM NOTES	24
TAKING A CLOSER LOOK	6	FLY TYING	26
CO-OP NEWS	22	ASHORE & AFLOAT	30

James F. Yoder, Editor

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fishing outlook

by george e. dolnack, jr.

Some of the best ice fishing in the state is provided by Wyoming and Luzerne Counties, both of which were once a part of Northampton's unlimited boundaries.

But at one time, it was a toss-up as to whether the area would be a part of Pennsylvania or Connecticut. Confused? Well, here's the story of the role played by the Wyoming Valley in our country's formative years.

In 1620, King James I granted a charter to the Plymouth Company giving them all the territory from the Atlantic to the Pacific between the latitudes of 40 and 46 degrees north. Connecticut in turn purchased a portion of this land from the Plymouth Company in 1631 with the southern boundary falling at 41 degrees north latitude.

William Penn's grant in 1681 set his

northern border at 42 degrees north latitude and overlapped that of Connecticut's by one degree.

After some yankee explorers spread the word of the Wyoming Valley's fertility and beauty, the Susquehanna Company was formed in Connecticut for the purpose of establishing a colony in Pennsylvania. But it wasn't until 1762 before the first settlers migrated to the valley. Their stay was short and they returned home that winter under the threat of war from the Delaware Indians who moved into that part of the state some years before.

The following year they returned under the watchful eyes of the Pennsylvania authorities who claimed possession of the land through a previous agreement with the Six Nations.

That autumn, the Indians' cabins

Left: Two Harveys Lake regulars who fish nearly every day of the winter season are Catherine and Alex Glogowski.

were set afire. Teedyuscung, respected King of the Delawares, was burned to death and fingers were pointed at both the Iroquois and settlers for the misdeed. But the Delawares blamed the Yankees, attacked, and in a fit of revenge killed many of them. The survivors fled back to Connecticut, thus ending the first Wyoming Massacre.

Forty of the group returned nine years later and constructed a blockhouse which they named Forty Fort. Hostilities immediately broke out between them and the Pennsylvanians who, under the leadership of the county sheriff, assailed the fort with 200 men and a six-pounder cannon.

Lawyers in England (who were studying the situation at the time) sided with Connecticut's claim and the Pennsylvanians left the valley. Sometime later, seven towns were combined and formed into the single town of Westmoreland which in 1776 became a county of Connecticut.

Paying no attention to the legal decision handed down, the Pennsylvanians went to war with the Yankees again until the revolution forced a shaky truce between them.

During our war for independence, the Seneca Indians who were allied with the English, along with a contingent of rangers led by Colonel John Butler executed a well-planned attack on the Wyoming Valley. The colonials were outnumbered 3-to-1 and the resulting slaughter became known worldwide as *The Wyoming Massacre*.

At the close of the revolution, more settlers from Connecticut flowed into the region and trouble flared up again. But the dispute was finally settled in favor of the Keystone State after Congress heard the claims of both

sides. However, the Yankees refused to give up the land and steps to expel them caused more bitterness.

In 1786 after two of their young men were killed by Pennsylvania soldiers, they formed their district into Luzerne County, a part of which became Wyoming County in 1842. So much for the area's history!

District Waterways Patrolman Stephen Shabbick says that lakes in Wyoming County usually have ice until the first part of April.

Lake Carey, located off Route 29, is one of the most popular spots in his area. Here, pickerel in excess of 25 inches have been pulled through the ice and trout are also taken. A few perch are around too, and a productive bait for this tasty fish is what is known locally as a waterworm. Crappies in the ten-inch class are also plentiful on the lower lake and gobble small minnows about an inch-and-a-half long.

Another favorite is Lake Winola, located off Route 307. A small jig garnished with a mousee grub, white grub, meal worm or wax worm will pile up the bluegills most anytime. But according to Shabbick, the best catches are made late in the season. Perch in Winola run ten inches and up. Top fishing for them comes at daybreak and early rising fishermen are well rewarded. There is also a good carryover of trout here.

In Wyoming County's northwest corner, near Jenningsville, are two lakes that rate high on the ice fishermen's list. Chamberlain Lake is good for bluegills, crappies and bass. Daytime anglers score big on the crappies which tape out at a foot or longer.

A short piece away is another small pond which is considered one of the best pickerel holes in the county. Three-inch minnows fished from a tip-up are irresistible to this solitary predator.

Stevens Lake, off Route 29 near Tunkhannock, produces some whopping largemouth bass and Shabbick

said that more largemouth are caught here on tip-ups than anywhere else in his district. Large minnows take these flag raisers that range up to two feet in length. Pickerel seem to run a four-year cycle on this lake and if the past holds true, this should be the year of the pickerel.

Oxbow Lake, just northwest of Lake Carey holds 15- to 16-inch perch. Though fishing is spotty, anglers using mousee grubs and waterworms fished on a bare hook and jigged make out well about a half hour before dark.

Anglers also fish the frozen coves of the Susquehanna River for muskies, bass and walleyes. This risky venture should not be attempted unless you're wearing a flotation device. Some fishermen tie one end of a rope around a tree on shore and the other end around their waist as an added precaution.

Claude Neifert, Luzerne County District Waterways Patrolman says that lakes in his area usually have safe ice until the first of April, too.

Harveys Lake sees the most ice fishing in the region and one of the big attractions there is the smelt, which, Neifert said, have made a strong comeback. A perch eye or white grub jigged off the bottom are the top tempters of this delicately flavored fish. Rainbow trout, also popular on Harveys, go for minnows and sometimes take salmon eggs or corn. Along with panfish, some nice pickerel are taken too.

Lake Jean, in Ricketts Glen State Park, is best known for its muskies that have measured up to 42 inches. These sharp-toothed bullies have a banquet on big, big minnows or suckers 6- to 8-inches long. Walleye, bass and panfish are also fair game.

For the all winter trout fisherman, Sylvan Lake, near Sweet Valley, is a good bet. The rainbows here, like most other places, prefer minnows but will also take salmon eggs.

The lakes in Luzerne and Wyoming Counties generally freeze early and maintain safe ice well into mid-March.





SOME TRICK!

A few years ago, while fishing on the Loyalsock, I had a peculiar experience happen to me - I thought I'd tell you about it after these years.

One Sunday morning, four of us left Mahanoy City and headed for our favorite stretch of water on the Loyalsock, in Lycoming County. As per usual on the stream, to each his own, and I ended up on a beautiful deep running pool — a narrow rippling inlet, spreading out to form a nice hole roughly 30' x 25'. I was spinning with a C.P.#4 and about 6:00 p.m. when I had a good bump. I knew it had to be big so I started to bring it in. As usual, I never carried a net and one of my buddies was about 50' away! Bringing it in seemed odd; and, getting it in closer, I saw my C. P. and it wasn't in the fish's mouth. It was 6 inches away and my C.P. had a treble hook which was caught in a loop of a snelled hook sticking straight out of the mouth. The fish was a brown trout — heavy, firm and full of fight. Some fisherman had previously hooked this fish before with a #6 snelled hook and worm then lost it.

To hook this loop sticking out of the trout's mouth, hardly seems probable, considering the current, the fish facing upstream, my position and angle of casting, etc.

PETER W. AUGUST
Mahanoy City

LOYAL FAN

I have always been a fan of the Angler's and will always be one. I just can't wait to get the next issue so I can get some fishing tips and to see if there's some action from my area of the state. I've lived most of my life in Monroe County. I've fished about every stream and lake in it and been a fairly successful angler. For the last 7 or 8 years, I have taken up the art of fly fishing. I was always a spin fisherman and was always able to catch my share for about the first 3 or 4 weeks of the season, but after that could never really do much with spinners or bait. My uncle suggested I take up fly fishing to see if I liked it. Well, I tried it and loved it. I catch many trout through the entire season. I have gone crazy with my newfound love, and have put a lot of time and money into it. I read many books and buy a lot of equipment for flies as I am

now learning to tie my own. I caught a 21-inch, 2-pound, 7-ounce brown trout on a black ant; and a 19-inch, brown on a cahill. So far they're my biggest. I caught lots of other nice fish and am looking forward to next season. I do most of my fishing in Tobyhanna stream and am a member of the Tobyhanna Fishermen's Association. I have fished about every stream in the county and as far as I am concerned there isn't a better trout fishing stream than Tobyhanna. I became a member, not only for the fine fishing, but to be more of a sportsman and to help to raise my two sons to be good sportsmen. The objective of Tobyhanna is to improve hunting and fishing on public game lands. I think your readers would be interested in reading more about a fine sportsmen association like Tobyhanna; and I think many more people would like to help get even more projects started like the one in the Poconos. I think the time is right for a story on a project like this. I know I still like to read about the good things happening in life and try to help make things a little better for all mankind myself.

EDWARD BONSER
Canadensis

AN OPINION—

I am writing to Leaky boots in regard to fishing license for young adults in the age group 12- 16 years.

As with all programs of the Fish Commission, when in need of money, up goes the license fee, which I am not against. With inflation and the prices of everything going up, they are justified in asking for more money.

In this day and age of modern fishing technique — spinning rods, depth finders, water temperature gauges — anyone can be a fisherman in a couple days. This is for the critic who will say, they are only kids. 90% of the families have some sort of income — no excuse why the kids can't buy license. Entertainment of movies, football, basketball games are as high as \$4.00. But ask for a fishing license and all hell breaks loose.

Perhaps some politician is afraid he would lose a vote or two if he sponsored a bill to have a fishing license for 12- 13- 15-year olds.

As for kids not getting in trouble when fishing — phooey — they get in trouble regardless.

In closing have you ever been on a creek and seen a man with 4 or 5 kids and 9 out of ten times, they don't belong to him. They aren't supervised and get mischievous. They are there as a cushion so he can catch more than his limit. The kids pay no attention to their rods and make a nuisance of themselves to other fishermen.

Having a license would make them appreciate the sport and be a considerate fisherman.

LARRY SOUCHAK
Mahanoy City

NOT THE LAST!

This picture was taken on our return from Lake Erie. My friend Richard Baker, of Barnesboro, Pennsylvania, and I caught three coho salmon. Mine were 23¼-inches, 6-pound and 29-inches, 10-pound. Mr. Baker's was 23¼-inches, 6-pound. We were fishing Elk Creek. Lake Erie was too rough for our small boat. This was our first trip for coho, but it won't be our last. We would like to land a few chinook.

I have been receiving the Angler for about four years. I enjoy all your articles even though I am strictly a trout fisherman.

JOHN KUNTZMAN
Elmora



WATCH OUT!

It has been thirty months and thirty Anglers since I began my military tour here in Germany. There are more trout here (big brown trout) than Carter has liver pills. However, at over \$4.00 for a day's fishing permit and a three-trout maximum limit, plus a yearly fishing license, fishing here is just too much of an expense for a poor GI like me. I'll pay \$10.00 for a Pennsylvania fishing license anytime! The Angler is just great, but gives me a touch of homesickness every issue. I almost went AWOL last April. The Angler, minus homesickness, has given me much reading pleasure and a lot of ideas and fishing to look forward to upon my discharge, which is April 17, 1976. At that time you can find me back in York County again fishing four years of the army away.

SPS FREDERICK L. PICK
534th Sig. Co. Augsburg

You've got some catching up to do, Fred!
Ed.

SEEING'S BELIEVING!

In the spring of 1975 my husband and I took our niece, Cindy Carpenter, of Pittsburgh, trout fishing by boat on Ryerson Station State Lake, Greene County. Someone had told us trout were biting on *red gum drops* — so, this was the bait Cindy was using. She got a strike, but not take. After about two hours' fishing, she got tired and went to her grandmother's nearby the lake. We fished for 2½ to 3 hours longer, caught our limits of trout and went to the same home where we all were visiting. We started cleaning our fish and the first trout (caught by worm) we gutted, produced **one red gum drop!** There were three very open-mouthed, wide-eyed fishermen and women standing there! They love Ryerson State Park Lake and spend many, many enjoyable hours there. Thank you for your part.

HELEN AND JIM LEVANDER
McKeesport

GREAT START—

Enclosed is a short story written by my 14-year-old son about a fishing experience that he shared with a friend. It is very gratifying to know that a youngster can enjoy and appreciate clean water, air and what the out-of-doors has to offer. With the attitude toward nature this youngster has, I don't have to be concerned of his whereabouts.

J. R. FAGAN
Allentown

It was a Tuesday morning in July when my friend and I decided to go fishing for native brook trout. The small clear stream ran smooth and low. We got there about 10:30 a.m. that morning, laughing and talking about catching our limit of nine-inches. The stream itself in some of the widest spots is about ten feet and in the smallest spots about ten inches. We walked the old dirt road for a bit up to where the stream runs under the road. He and I fished a few of the holes but were wondering why we weren't getting any. Why? Well to begin with we were going right up to the holes. They are the most spooky fish I have ever seen. Once they see you, that's it. They won't hit. They usually hit when the worm (or whatever bait you use) hits the water. After about an hour's worth of fishing, I got a hit and pulled out a beautiful 7-inch. I kept the small trout figuring I'd get more. I was watching Joe when he bent down for a drink. The air smelled so good and clean. Joe and I walked to a hole and saw at least four keepers. But they saw us and took off. I thought I had better clean my beautiful fish. The colors on it were so bright such as red, ivory, orange and in-

digo. Joe and I decided to pack it in and try it again on a Tuesday in July.

CHRIS FAGAN
Allentown

GOOD ADVICE—

This is a letter for the female fishing partners who are tired of getting up early and traveling a long distance to get to a great fishing area.

Enclosed is a picture of a 3-pound, 17-inch largemouth. An example of many that my husband Ken and I have been catching in the Ohio River at South Heights, Pennsylvania. Which proves you don't need to travel far from home in Pennsylvania to obtain good fishing. We used to travel north to near Erie on his days off and that meant leaving very early in the morning and coming home late that night. Now when we want to go fishing we just walk down to the river and catch our limit in no time at all.

(MRS.) CARMEN RUBOLINO
South Heights

HAND FED—

My father, Albanus Coleman, lives in the small town of Klingerstown, located in Schuylkill County. The Pine Creek runs alongside of his house on the main street. There are a few rainbow trout in this creek, maybe 12 or 14. He has been feeding these fish for months and back in September when they had another flood, these fish disappeared. However, they have come back and he is again feeding them. He feeds them bread, cheese, and other food but the food they like best is canned corn. When he is feeding them, he talks to them and he can actually pick them up with his hand. When he talks to them, they will actually stay laying in his hand for a minute, maybe two.

MS. VERONICA DAVIS
Williamstown

THE SEARCH ENDS!

We were really delighted when a friend brought us his copy of the November *Pennsylvania Angler* because the fisherman on the cover is my husband. It's perfect! Is it too late to get some extra copies of the cover?

The editorial on the inside front cover by Mr. Abele is also very applicable to my husband. Fishing is a very important part of his life, year-round, and perhaps especially in the fall. Thank you so much. I am enclosing a check for \$3.00 for a year's subscription to the *Pennsylvania Angler*.

MRS. BYRON W. (ESTHER A.) SHEETZ
Reading

Well, Mrs. Sheetz, your husband is now in for two years of good reading. As we've notified you prior to publication (and as our readers will remember from last month's issue), reader Ben James was so moved by the mood of that November cover of Russ Gettig's that he offered to buy a year's subscription for " . . . the man on the cover" — without having the slightest idea who he might be! Now that we know, we've adjusted our mailing plate accordingly and Byron will receive the additional year, courtesy of Ben James. We've sent the extra copies that you requested and trust that both you and Byron will enjoy the *Angler* in the next 24 months. Ed.

GOOD SUBSTITUTE!

I will be 81-years young on St. Valentines day, February 14, and I am not able to get out fishing like I used to do years ago so when I am not able to get out fishing I look in the *Angler* and I get a big kick when I see all those fishermen with all those nice fish they catch and that's why I still want to keep getting the *Angler*. Thank you.

VALENTINE SWEGEL
Forest City

Happy Birthday, Valentine! Ed.

ATTAGIRL!

I was upset when I read July's issue of the *Angler* where the male subscribers complained because May's issue had a woman on the cover. What difference does it make? I subscribe to the *Angler* not for the cover but for the contents. You have many interesting articles.

A Very Happy Subscriber
MS. DORIS SCOTT
Pittsburgh

SKIPPACK NEWS—

Thanks for trout stocking the Skippack. Two things: (1) it was a good ad for Skippack. (2) I think a good ad for the *Angler* too — also the kids had a swell time. I didn't get a thing — just a good sport. Hope we can keep the Skippack clean. Thanks.

HAROLD B. WEBER
Skippack

Taking A Closer Look

by Tom Fegely

THE ALL-SEASONS GAMEFISH

The chain pickerel may be outsized and outfought by its larger cousins — the muskellunge and northern pike — but it certainly isn't outnumbered by the anglers that pursue it throughout the year. Like the yellow perch and the bluegill, *Esox niger* is both legal and available throughout the four seasons. It is protected only during its spawning time from mid-March through early May.

As soon as the water's surface is free of ice, pickerel begin to seek out shallow breeding areas. In the marshy, vegetated backwaters of a stream or river or near shore in a lake or pond, a 2-pound female may indiscriminately discharge up to 30,000 adhesive eggs which sink and cling to aquatic plants and other bottom debris. She is usually attended by two or three males who fertilize the tiny eggs as they pass from the female's body.

In a week or two the young hatch and at once begin their lifelong role of predation. Although a young pickerel's first food consists of minute plankton organisms, it soon graduates to small crustaceans and later crayfish, insects, worms, and other fish. So ravenous are they in their feeding habits that they frequently prey on their smaller brothers. In one



Scott Gritzinger hoists a hefty pickerel from Promised Land Lake's depths.

documented study, two five-inch pickerel devoured over 400 one-inch minnows over a period of 48 hours.

The chain pickerel's preferred waters are those with abundant vegetation and shallow mud bottoms. The Northeast sector of the state, especially, is known for its many small pickerel lakes. In fact, it was in Pike County's Shohola Lake that the Pennsylvania state record pickerel was caught in 1937. The trophy fish measured 31½-inches and weighed 8-pounds. The all-time record chain pickerel wasn't too much bigger but various sources disagree on where the champion fish was taken. One source lists a 27-inch, 9-pound, 6-ounce pickerel as having been caught in Aetna Lake, New Jersey in 1957; and,

another claims that a 31-inch, 9-pound, 6-ouncer was taken in Georgia in 1961. Regardless, the Pennsylvania record holder may prove to be the longest, if not the heaviest, ever taken on sporting tackle.

The chain pickerel is well named. Its sides are decorated with a pattern of dark, chain-like markings running from the cheek to the base of the tail. A dark green back fades into the series of yellow-green "chains" on the side and then to a creamy-white belly.

The chain pickerel has two smaller cousins living in various waters throughout the state. The Grass Pickerel is the smallest member of the pike clan, measuring only six to nine inches in length. The Redfin

Pickerel gets slightly larger and closely resembles the grass pickerel in coloration — dark green sides with about 20 distinct dusky bars.

The redfin is sometimes called the banded pickerel, barred pickerel, or brook pickerel. Any of these three names are more appropriate than "redfin" for it does not possess red fins.

Throughout their ranges both subspecies of these "mini-pickerels" are known to hybridize.

* * * * *

Anglers who have taken a close look at a chain pickerel seldom mistake it for either a muskie or a pike. Yet, each year, Waterways Patrolmen find it necessary to prosecute anglers with undersized pike or muskies that they've mistaken for pickerel. (The minimum size of a legal pickerel is 15-inches while a pike must measure 24-inches and a muskellunge 30-inches.)

A distinguishing field mark of the pickerel is a dark, vertical bar directly below the eye. Furthermore, it is the only one of the three pikes to have *both the cheek and the gill cover completely covered with scales.*

Since the chain pickerel is typically

found with populations of bullheads, pumpkinseeds, bluegills, and perch, it is frequently the first true gamefish caught by a young angler. Often this solitary, nonschooling creature will take a youngster's worm-baited hook even though shiners seem to be much more desirable.

The chain pickerel dwells in the numerous lakes and streams which are tributaries of the Delaware and Susquehanna Rivers. It is not found in the Allegheny drainage.

The names banded pickerel, eastern pickerel, eastern pike, chain pike, jack pike, jackfish, and snake are used in place of chain pickerel in various areas. In the early days, New Englanders referred to it as the "Federation Pike" because of certain copper coins which were stamped with chains of 13 links.

A 17-inch pickerel tips the scale at about 1-pound. By the time it reaches 20-inches its weight has doubled and a 25-incher weighs about 3¾ pounds. The meat of these larger fish is sweet and tasty but somewhat bony. They should be cleaned and scaled soon after being caught and then fileted and fried.

It's still not too late to catch Mr. Pickerel in his winter haunt. Try the shallow, weed-infested backwaters. Use a live shiner on a #2 or #4 hook and lower it to about one foot off the bottom. When your tip-up's flag flies, don't be too quick to set the hook. In true pike fashion the pickerel grabs the minnow crosswise in its mouth, swims a short distance, and then pauses to swallow its prey. When the fish moves a second time, give the line a healthy yank. If the line is held too tightly while the pickerel is making its initial run, the resistance may cause the fish to spit out the bait before you've had a chance to set the hook.

* * * * *

In inland waters, the daily limit for pickerel is six fish — each 15-inches or more in length. During the period from January 1st to March 14th, and December 1st to December 31st, however, the daily limit is reduced to three fish.

In the Conowingo Reservoir and Delaware River there is no closed season on pickerel. Pickerel of 14-inches are legal in the Conowingo while there is no minimum size enforced in the Delaware.

* * * * *

Kent Greenbaum is well pleased with his 16-inch "hammer handle" taken from Carbon County's Lake Harmony.



Playin' 'Possum...

'Possum Lake Muskies, that is!

*Lee Day and his over 40-inch musky
taken on four-pound test line.
Find this hard to believe? Read on.*

by Bill Porter



The winter scene came slowly to Cumberland County's Opossum Lake in late 1974 and Lee Day, Newville R. D. 1, usually a very patient fellow, began to scan the outdoor thermometer more frequently than normal. Ice fishing was on his mind and it was a little hard to do — with no ice. Then, as the New Year holiday became history so did the warmer weather, and although the bottom didn't exactly drop out of the glass, the little red line did move below the freezing line and stayed there.

Opossum Lake finally had its icy covering, one that would support fishermen and their paraphernalia. Lee was on his way — and perhaps our story begins at this point.

It might be acceptable to say that this angler was a hunter, a hunter of muskies. The lake had been well-scouted on numerous occasions before icing over. There was a particular musky to be caught. In fact, if all of the secrets were known, there probably were several particular muskies to be caught.

Anyway the target area for this fishing expedition had been marked mentally and Lee set about his craft accordingly. Four tip-ups with sturdy lines and appropriate hooks were rigged with choice musky-sized minnows. These were duly placed in the carefully carved holes arranged around the perimeter of the musky's lair.

The fifth tip-up, almost as an after-

thought, carried four-pound test line, a number 8 hook baited with a tidbit type minnow, at least as far as any respectable musky would be concerned. Lee's intent was to catch a few crappies while waiting for the real business at hand — the strike of the musky.

Action was slow but stoically accepted by the fisherman, a veteran of many fruitless hours of musky fishing before being rewarded with a hit and a catch. Then the crappie rig upended and the first activity of the day was about to begin.

Without undo haste, Lee made his way to the spot, picked up the loose line from the spool, got his house in order, so to speak, and hauled back on the light line. Nothing happened — the line was tight!

Knowing the lake bottom and its brush piles, Lee eased the initial strain and began to jiggle the line a bit to see if the crappie would swim out of its own accord to be landed, hopefully followed by another and another, as long as the school stayed in the area.

It didn't work quite that way.

The brush pile began to move in a slow and deliberate way not unlike a freight train gaining some momentum. Line spun off the tip-up's spool, through the angler's fingers and out of sight into the depths of Opossum Lake. No crappie. No guesses. The musky had ignored the full course meal and had settled for an appetizer instead.

Working delicately with the light line and the hand-lining technique involved, Lee gained line, lost line, had some neutral moments when the battle was a tie, and finally had the brute up to the edge of the hole where its huge size could be seen for the first time. Or at least he could see part of the bulk as the diameter of the hole permitted.

There was no way that fish could come up through that hole on that light line.

Well, there was a way; but it presented some problems. A gaff rested in the wooden tackle box closer to the "musky" tip-ups where it was expected to be needed. It was, of course, out of reach of Lee's outstretched arm and fingers.

Only one course remained open and that was to let out line and inch carefully back to the box. This was done, but at the same time the fish felt the lighter tension and it began to "inch" away from the hole, too. Finally, gaff in hand, Lee was back, working the musky again into position at the bottom of the hole.

Victory was in sight but not quite accomplished. There was the sticky bit of getting the musky's jaws and head started in the right direction so that the gaff could find a strong hold to lift the monster from the water. Eventually, Lee, the gaff and the musky were all in one pile on top of the ice some distance from the hole. The four-pound test line had held and the 40-inch, 17-pound musky was evidence of the fisherman's skill.

As a sort of anti-climax, several other fishermen gathered around admiring the catch with one of them saying, "We couldn't understand why you were fooling around that one hole so long. When we get caught on the brush, we just tear the line." Reportedly, Lee just smiled.

Talking about the catch some weeks later, Lee indicated some of his do's and do not's for musky fishing. He likes his tip-ups rather simple and prefers to hand-line fish that are hooked. The particular type of tip-up used for the adventure above is rather simple, consisting of a tripod arrangement, a spool to hold line, and a balancing bar. This last item is the unique feature that can be adjusted to the weight of line, bait used, and other factors before a fish can register a strike. Lee also paints the one side florescent orange and the other side black. Then according to the time of day or weather conditions, he can set either side toward him for best viewing purposes.

Basically, his terminal tackle is rather standard for all species of fish. Hook size and line test are normally related to the species he expects to catch. A small split shot helps take the bait down to the desired depth and, again, the size of the shot is relevant to the bait being used. A swivel placed above the shot completes his basic rig.

When it comes to drilling holes, he

would sooner gouge them out with a spud than an auger or other drilling device. His theory, and it proved itself in the story above, is that the hole should have smooth edges on its bottom side, curving out in the manner of an upturned saucer. There is more direct play with the fish and fewer sharp edges to wear or tear the line.

Lee also uses a skimmer to remove chunks of ice during the cutting process as well as to eliminate skim ice that forms while waiting for a fish to bite. And like many other veteran ice fishermen, he employs a weighted clip-on device to determine how deep the water is below him and at what depth he will set his lines. Beyond that he feels that it's up to the fish to hit and the skill or luck of the fisherman to land it.

There's more to it than that, as any consistently successful fisherman knows. But, as all fishermen know, most consistently successful fishermen, such as Lee Day, aren't going to divulge all of their secrets. Some won't share the information, and others are just plain modest about their accomplishments and are reluctant to speak out.

Lee is in this latter class. When asked if he had ever caught any muskies before, he responded rather hesitantly, "Yes, seven (pause, pause, pause) that is, **seven that have been over forty inches!**"

Lee Day's tip-ups are of his own manufacture, but they're simple and effective for his Opossum Lake musky fishing.



The Pioneer Tannery

by Wilbert Nathan Savage

Editor's Note: Although the following might, at first glance, appear to be far removed from fishing or boating, per se, it is an interesting and most comprehensive narrative about one of Pennsylvania's earliest industries. One which, by its very nature, was to have a profound impact on the waterways of the state; setting a pattern, as it were, for later and diverse industries to follow in seeking a quick and easy method of waste disposal — simply dump it back into the very stream which, ironically, was the prime reason for locating an industry (both then and now!) in the first place: the availability of pure water! An excerpt from the "Report of the State Commissioners of Fisheries, 1896" would bear this out:

"With each recurring year the Commissioners make strong protest against the extent to which the streams of the State are polluted. The culm and sulphur water of coal mines, the refuse of tanneries and chemical works, saw dust from saw mills, deleterious material of all kinds are emptied into our rivers and streams with impunity. Attempts at legislation which will deal severely with this crying evil have been vainly made, for selfish corporate interests have been hitherto too powerful." (sic)

In 1861, a scholarly historian of that and earlier periods put into writing this observation: "The tannery did not usually tarry long behind the first occupants of a new town."

How accurate that perceptive notation was; and, with some 8,229 tanneries operating in the United States in 1840 (the Union then consisted of only 26 states), Pennsylvania had its full share of crude but vital tanning facilities. Some of these early commercial undertakings were quite large, but for the most part they were of the

small-town variety, operated by regional tradesmen and laborers.

Dozens of different leather items were in steady demand in each community, and it was up to the tanner to produce a dependable supply of the various grades and types of leather that went into articles ranging from footwear to aprons, harness, saddles, bridles, buggy tops, gloves, belting, leather breeches, bellows, binding for books, and so on and on.

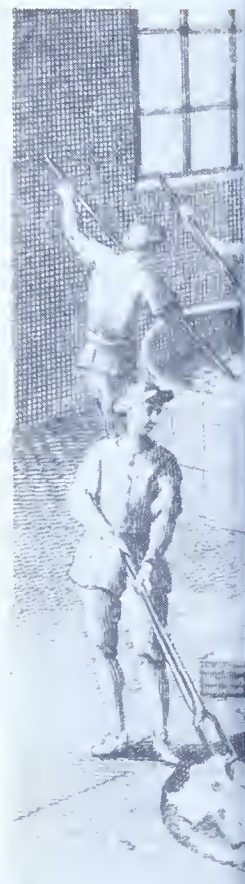
It is interesting and perhaps a bit puzzling to note that for some unexplained reason the tanner was slow to utilize power-driven machinery, and in this respect the flour miller, the operator of the up-and-down sawmill, the iron founder, and others were more advanced in their trades. This lag becomes even more conspicuous when we consider that the tanner's art evolved from antiquity, and that the leather from tanners' vats played a significant part in the development of many early industrial machines that seemed to overtake and easily outdistance the pioneer tanner as he struggled along toward a better day and advanced innovations for his craft.

Nevertheless, the tanner did enjoy some balancing factors that helped to average the scheme of things, and he had several sound advantages going for him. Hides were available everywhere either as a result of the fur trade or from the slaughter of domestic animals. Also, there was an abundance of tanbark provided by trees ". . . that needed to be destroyed anyway, because they were an obstruction to agriculture . . ."

Not everyone continued to agree, however, with the inordinate practices stemming from that particular viewpoint. In later years this was recorded: "The riches of the forest augured well for the tanning industry, though not for the prudent conservation of resources."

If many others did not speak out in

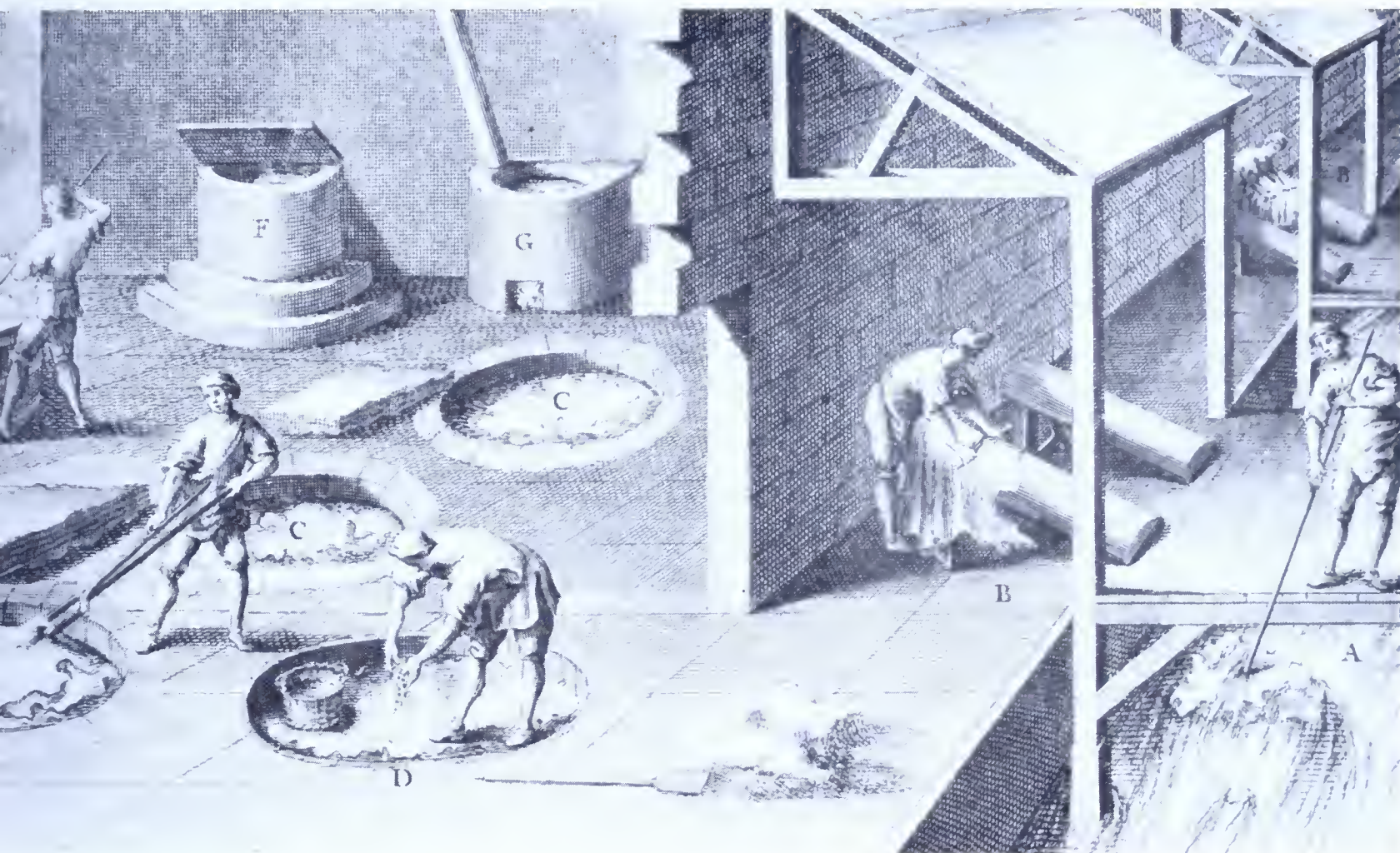
This engraving depicts the manual aspects of tanning. Washing the hides (A), working hide on beam to free it of flesh, filth, and hair (B), distributing the bark in the tan pits (D), and the duties of the handlers (C & E) remained standard operations in tanyards well into the nineteenth century operations. All engravings: courtesy Smithsonian Institution.



a similar tone of reproach, it was likely due to the reasoning set forth in this excerpt from one of the historical records of pioneer times: "Tanning was a well-established branch of domestic industry . . . meeting the needs of an essentially agrarian society since the arrival of the first settlers . . . and providing a much-needed distribution of wages on a trying frontier . . ."

Using timber to fulfill a wisely calculated need was one thing, but wanton waste and exploitation was something else. One wonders, indeed, for what span of time the earned dollar or its equivalent has at most levels managed to command first consideration, while all other environmental components seem traditionally and almost invariably to trail in a lackluster category of secondary importance!

William Penn's account of the "Province of Pennsylvania" in 1681 echoed the sentiments of the region's first administrators, the royal governors of New Sweden. It listed hides among the "Commodities that the Country is thought to be capable of . . ." and tanners among the several representatives of the handi-



crafts most fitted for life in the new province. Two years later, in a letter to the Free Society of Traders, Penn reported a tannery at Frankford so plentifully supplied with bark that: ". . . only God's blessing was needed to guarantee its Reputation and Profit."

In 1685, giving a further account of his proprietary, Penn enumerated among the colony's useful tradesmen: tanners, shoemakers, glovers, and fellmongers. Later, Gabriel Thomas' account of Pennsylvania in 1698 specifically mentioned tanners and gave an exact prospectus of the business.

"Tanners," wrote Thomas, "may buy their hides green for three half pence per pound and sell their leather for twelve pence per pound. The courier, whose job is finishing the leather, receives three shillings and four pence per hide for dressing it."

An early resident of Germantown told of the rewards of tanning in this manner: "Hides for tanning are abundant; indeed, two raw for one dressed, and there seems every likelihood for great profit."

In the fast-growing city of Philadelphia, the early tanneries were

located on Dock Creek where, by 1739, six were in full-time operation. Leather had steadily grown to be a major market item, and as early as 1700 Pennsylvania had taken firm legislative steps to insure the quality of finished leather. There were statutes that prohibited the sale of an ill-tanned natural leather product, and in addition there were laws regulating prices.

Another aspect of tanning that lawmakers tried to govern (for the good of the general citizenry) had to do with sanitation. Actually, this was one of the earliest battles waged against offensive pollution. In this effort, however, the end results were often more noticeable for their failures than for any signal measure of success. In one account of early tanning we read: "The depositing of foul-smelling animal remains in 'tann hills' was forbidden, a regulation nigh onto impossible to enforce." This law also was in effect in states to the north, and is outlined in *Trumbull's Public Records of the Colony of Connecticut*, Vol. 1.

So the unsavory but essential reminders that a tannery was situated nearby were distributed with frontier

originality that either by chance or intent came to be surprisingly systematic and uniform.

One of the largest and most important tanneries in KeystoneLand must have been the one owned by the L. H. Alden Company. This thriving industry was located in Wayne County. Its significance was such that tannery records pertaining to this firm still survive in the offices of the Pennsylvania Historical Society. Amazingly, there are 78 volumes of well-preserved records of the operation bearing dates from 1848 to 1883.

In 1788, when Pittsburgh was little more than a collection of log cabins, the settlement had two tanneries. Pittsburgh's first tannery belonged to William Hays who, by 1790, was doing a flourishing business near what now is Liberty and Fifth Street.

By 1803 there were seven tanneries in Pittsburgh; in 1857 there were thirteen, and these had an output valued at more than \$10,000 annually. Pittsburgh was the origin point for the famous "patent leather," invented and exclusively produced by J. Y. McLaughlin. With the new type of shiny leather first appearing in 1826,

the ingenious Mr. McLaughlin employed forty men and used 15,000 hides and 100 barrels of varnish each year at his plant on the Allegheny River near 31st Street.

The year 1876 saw Pittsburgh with a score of tanneries and the city was recognized as the leading center in the United States for the manufacture of the very finest in harness leather. The tanneries then occupied about thirty acres and employed 750 men who drew some \$400,000 in annual wages. About 900,000 hides were processed each year, and they had an average market value in excess of \$3.75 each.

Dubois must have had a large 19th-century tannery, for Maryland's Garrett County Historical Society has a record of one Adam Richter having gone to Dubois from Accident, Maryland "*to gain added experience in tanning at a sizable commercial tannery located at Dubois, Pa.*" The record also states that Adam's father, John, had worked before the year 1872 in two Pennsylvania tanneries, one of which was the Meyers tannery at Meyersdale, Somerset County, and later owned and operated a Maryland tannery located only a short distance from the Pennsylvania-Maryland line.

One of the best examples of several tanneries surviving and prospering in a very small town can be found in the history of Fayette County's Connellsville. An early settler named Anthony Banning owned and operated Connellsville's first tannery. It was built in 1791 on McCoy's Run in the eastern edge of the town. A competitive tannery was built in Connellsville by John Fuller in 1823. In that same year Isaac Taylor also built a tannery along the Youghioghenny River in Connellsville. On the opposite side of the river, Joseph Taylor (brother of Isaac), constructed still another tannery in the early 1840's. A little later, in what is still known to all local residents as Tanyard Hollow, scarcely a mile east of Connellsville, a man named Shaw built the area's fourth tannery. At least three of the tanneries were operating in the vicinity at one time — yet at that stage of development Connellsville's population stood at less than 400! With such competitive activity successfully extending over a period of many years in what was nothing more than a sprawling riverbank village, who would dare hint

that the tannery was not linked directly to the economic fundamentals of community stability and advancement?

If, in a few of the older Keystone towns, at least one tannery was never built and operated, there likely was a reason for absence of the industry. Perhaps an unfavorable geographic location created circumstances that made it more practical to freight in leather goods from some nearby town. Then, too, there could have been an inadequate flow of water, a scarcity of preferred tanbark, or the lack of a suitable site for the hide-processing enterprise. Certainly, in most instances, the everyday need for such a commercial operation came close to being comparable to the necessity of the blacksmith shop and the grist mill — both of which, incidentally, depended in one way or another upon leather as a primary requisite to the working mechanics of their operations, whether large or small.

But no matter how diligently one may attempt to stress the indispensability of the tannery, the yesteryear concern had a seamy side that made it the target of a great deal of intentional avoidance wherever it happened to be found. Frankly, it was the fixed source of a horrendous odor! An account of a school teacher seeking a place to board in a small Pennsylvania town in 1871 reveals this firmly stated preference: "*I want to board as close to the school as I possibly can, and just as far from that malodorous tannery as resident laws will allow!*"

It is not difficult to understand the universal rank smell of the old-time tannery when we consider the substances contributing to the identifying characteristic. There usually were bales of animal hides in varying stages of treatment, some fresh, some bearing the stench of age. Some wearing a sprinkling of salt, some being freed of excess flesh. Some soaking in several types of processing liquor, some with hair, some without; some soaked clean, some being readied for the wet-bath removal of filth and clinging flies. Salted hides might remain bundled or baled for three or four months, but fresh animal skins had to be hustled into the first steps of tanning with little delay. Air pollution, in one degree or another, certainly was

present and quite discernable for some distance around wherever a pioneer tannery existed!

The first operation performed by the tanner was the preliminary washing of all hides waiting to be processed into leather. This required about thirty hours. Then came the longer task of soaking and scraping the skins and removing the hair. In some instances this procedure took up to one year, but averaged about four months.

To carry out this part of the operation the hides had to be placed in wooden or masonry vats containing lime water. This helped to loosen the hair and prepared the skin for "beaming," which involved nothing more than a thorough scraping and rubbing of the hide. To accomplish this, the lime-treated hide was drawn from the vat, thoroughly washed, and draped over a "beaming horse" built like an inverted "V" and fitted with a half-round work surface corresponding to the crescent shape of the beaming knife. Lime vats were commonly above ground and a typical size was about five-feet-square and five-feet-deep. A peck of pulverized or burnt lime was used for each large hide immersed. If the solution grew too weak to complete the liming period, more lime was added and the vigor of the steeping compound renewed.

During the beaming sequence of tanning, the hide was scraped free of hair and all shreds of flesh not actually belonging to the skin itself. This step called for at least three brief immersions in fresh water as the process went along; finally there was a requirement for vigorous rubbing of the hair side (now scraped clean) with a special stone set in a wood handle, and described in several early accounts of tanning as: "*a kind of whetstone not unlike that used for sharpening knives.*"

Beaming was skilled labor, and great care had to be used in scraping and rubbing so as to keep the thickness of the leather as close to perfect uniformity as possible. The work was exhausting; and, in the course of a 12-hour day one man normally could beam no more than a dozen hides. Generally the task was carried out in a separate section of the tannery or in a special structure called the "beaming shed." Of the work one historian says, "*Working the beam proved the*

hardest and most loathesome of many unpleasant steps in the conversion of hides to leather."

Since lime actually was mildly harmful to the texture of the hide, the solution residue was removed by a water bath as quickly and thoroughly as possible after it had served its purpose. To aid restoration of pliability the limed hides were often soaked in what was known as "bate," a mixture of chicken manure, salt, and water. This set up a kind of fermentation that helped to make certain the finished leather would be softer and more receptive to dressing oils and dyes. When this process was used, beaming sometimes was completed *after* the hides had been carefully cleansed of the stinking bate liquor. This routine evidently wasn't always followed, however, since Thomas Martin's *"The Circle of the Mechanical Arts"* indicates that tanning methods in 1813 saw the hides go directly into the tannin solution after being washed free of bate in several soakings of clean water. Thus, beaming had to be completed before the bate treatment that lasted three to twelve or more days.

While it seems ridiculous to state the fact, the ill-smelling bating procedure called not only for *pure* water, but also stated a positive preference for *soft* water!

With the toil of washing, dehairing, bating, and beaming brought to an end, the hides were, in the language of the tanner, "ready to be put into tan." This process called for several steps and much time.

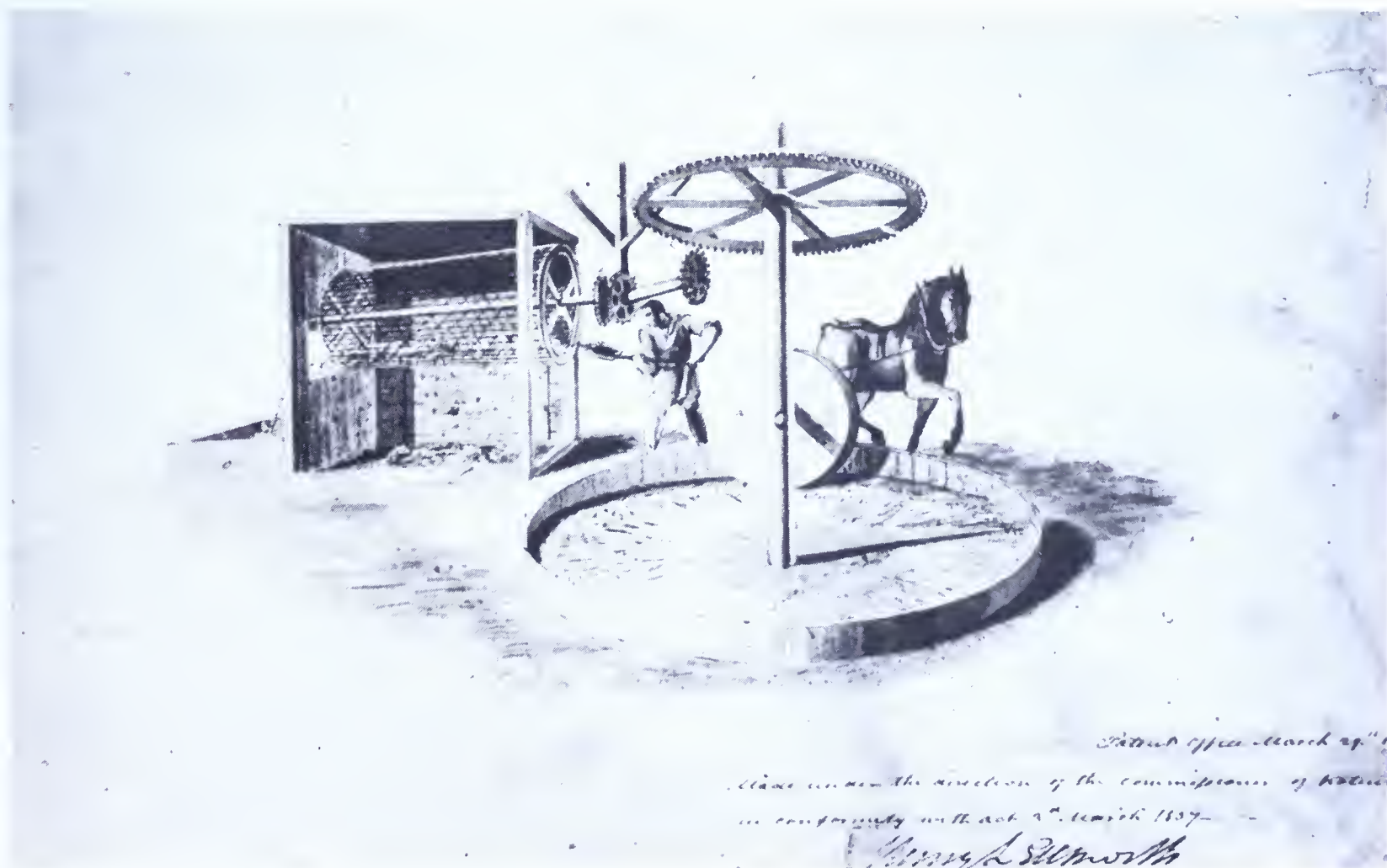
The early method of tanning was to fill pits or vats (which generally were in unenclosed tanyards, and more often than not were built so as to be at or near ground level) with alternate layers of prepared tanbark, hides, and water. When placed in the tan vat each hide required twice its weight in tanbark, plus at least twelve gallons of water. The hides in the bottom layers were always subject to the strongest action of the tan, hence it was necessary to shift them so that each hide would be exposed to equal amounts of tannin. It was estimated that in order to produce a top grade of leather the heavier hides had to remain in the tanning liquor for twelve to eighteen months. One hundred pounds

of hides would normally yield 52 to 56 pounds of durable leather.

Many of the tanning vats used as late as the very early 1900's were formed of closely fitted hardwood planks that walled up an excavated ground-level cavity; other vats were lined with stone or brick. While vats varied in size, it was not uncommon for a single receptacle to be able to handle seventy or more hides at one time. Water was at first poured into the vats by hand from buckets and barrels, but later it was supplied by hand pumping or pumping by horsepower; and, until simple bottom-installed draining methods were put to use, vats had to be emptied by tedious hand-dipping of the foul solutions!

When the long tanning process was over, the hides were placed on scouring tables and thoroughly cleansed with fresh water. Now the tanned skins were ready to "set out." Workmen squared each hide and the squares of leather were then "dubbed." A paste, usually made of codfish oil and tallow, was worked into the surfaces "to put water-resisting life and added flexibility into the

Preparation of the principal tanning agents, oak and hemlock bark, took place in horse-powered grinding mills.



finished leather." The dubbed hides then were stretched their full width and when partly dried (most tanneries had a drying loft or second floor) they received another coating of codfish oil.

After drying for an additional week the hides were arranged with the hair side up and "blackened" with a solution of lampblack or iron oxide. Then a light coat of fish-tallow grease or "tanner's oil" was applied and the hides were hung up for complete drying. When dry, each side was degreased with a steel-bladed tool known as a "slicker." Then came polishing with clean bristle brushes and soft rags. The hides now were ready for shipment or for sale locally. Those prepared for shipment usually contained ten hides in each bundle.

The tannery that finished two or three thousand hides per year was considered a booming small-town tannery. The processing of three thousand hides roughly required the consumption of 350 cords of tanbark. Calf skins could be tanned in as little as six weeks. But thick ox and bull hides, often used as sole leather, could take up to two years to emerge as fully tanned products!

Tanbark vital to all tannery operations sold at varying prices, ranging from three to seven dollars per cord. At one time the supply was believed to be inexhaustible, but this line of thinking came to an abrupt end when the scarcity of tanbark came to be the sole disadvantage that put many tanneries out of business.

Black oak, rock oak, hemlock, and some of the other oaks ranked foremost as yielders of preferred bark for tanning. Many tanneries had a special bark shed where the bark was stacked and dried. Then it was coarsely ground into small chunks by alternate stone and wood rollers in a crude mill operated by one or two horses. As little as half a cord of bark could be prepared in a single day. During the final years of the existence of pioneer type tanneries, steam and some water power came into use for running bark mills and also for pumping water. But, alas, improvements in operating methods had arrived too late; the day of the old-time tannery was then rapidly drawing to a close.

Early Pennsylvania tanneries were generally described as "prosperous" wherever records of their operation

are preserved. In this connection, special mention has been made of the "rich hinterlands" of Berks, Chester, and Lancaster counties. Even the State Capitol was not without the commercial activities of tanneries. One of the larger tanneries there was owned by Eldridge and Brick, and is known to have been in operation some 145 years ago.

Although labor costs were small in the operation of pioneer tanneries, so were the profits. Six hundred and fifty dollars would pay two men and two boys for a full year's work. Calf skins could be had for one dollar each, but when tanned they brought as little as twenty dollars per dozen. Good hides for sole leather cost up to four dollars each, but sole leather was marketed at only .25¢ per pound — a \$2,100 investment in sole leather hides realized a profit of only \$1,900 at the end of the long-term processing schedule. After all expenses were deducted, one tanner realized a clear profit of just \$600 on the handling of 1,600 pounds of sole leather, 200 upper leather hides, and 600 calf skins. Waste at the tannery of old was held to a minimum. Even the hair was sold as padding material for various purposes, and for use as a strengthening and uniting agent in plaster.

But regardless of the size of the tannery, or how much or little its profits, one requirement for the operation could not be altered: the need for a steady supply of clean water. As one historian put it, "*Without a command of unadulterated water, the tannery simply could not be brought into existence.*"

Of course such a specification for pure water somehow tends to be magnified in its absurdity when we consider that it was to be turned immediately into an offensive concoction strong enough to befoul anything it touched when finally it had to be emptied; and you can safely wager that disposal simply amounted to getting rid of vat liquor — whether lime, bate, or tannin — the easiest and quickest way possible, such as draining it out on the immediate premises. If it contaminated the soil with visibly destructive effectiveness, there is no recorded indication that it gave rise to even mild concern. And, if the acrid waste happened to *seep* (in considerable quantity!) into the very stream that

was servicing the establishment, voices protesting the indiscreet action most likely were seldom, if ever, heard!

Of course a much smaller volume of pollutants reached both earth and stream in those days, as compared to today's colossal quantity of widely distributed impurities. But this limited output certainly wasn't planned. It came about only because of a sparse population that operated scattered industries. And apparently the indifferent attitude toward environmental well-being must have reflected the beginning of an apathetic posture waiting to thread its parasitic way into coming generations. The mood was one of widespread disinterest toward safeguarding natural resources; of gain at nearly any price. And, this applied whether waste substances came from tanneries, blast furnaces, sawmills, or other early industrial activities. Unconcern thrived where defensive steps toward resolute betterment planning should have prevailed; competitive self-seeking flourished where the influence of more sensible considerations ought to have found united support.

Has man learned anything, then, from known mistakes of the past? . . . things that have to do with sanitation on his planet? . . . ecological things engaged in a life-and-death struggle? . . . things that affect and threaten the very existence of man himself? . . . sinister things that cast ugly shadows on timbered mountains, the streams, the air we breathe, the soil we walk on. Or has mankind leaned too far out over the precipice that overlooks total chaos? Is there a slender margin of chance that *Homo sapiens* might yet awaken and shed his cocoon of traditional insensibility? The answer is out there, somewhere, waiting . . .

Selected References:

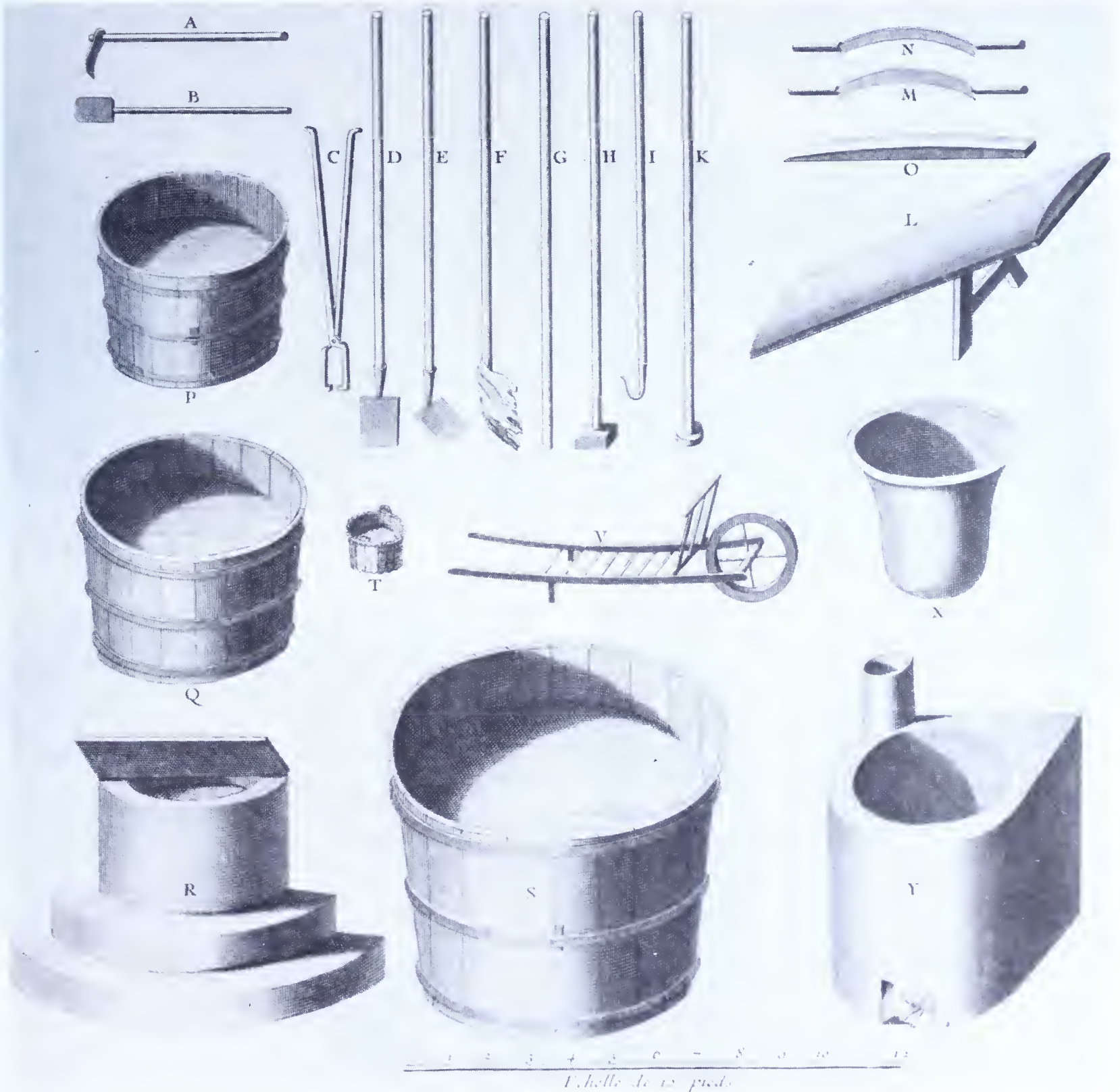
"Tanning in the United States to 1850," by Peter C. Welsh, Curator, Department of Civil History, Museum of History and Technology, The Smithsonian Institution

"Centennial History of Connellsville, 1806-1906" By a variety of authors
Magazine material from The Western Pennsylvania Historical Society, courtesy Miss Ruth Salisbury, Librarian

Tools & Equipment — 1764

As evidenced in the engraving below, suggestions for improving the art of tanning either mechanically or chemically had little effect upon the tanner's tools. Beaming knives (N & M), the smoothing stone (O), the beam (L), hooks (I), tongs (C), plungers (H & K), vats (P, Q, & S), and the willow basket for carrying the tan bark (T), were slow to change. These tools symbolize the technological conservatism of the tanner.

The stove with its paraphernalia for warming the tanning liquid and the wheelbarrow for transporting tanned leather from the pits to the drying loft completed the equipment inventory of most early Keystone State tanneries.





This crowd of would-be ice fishermen on Rose Valley Lake last year surrounded Assistant Supervisor Paul Swanson (center, holding a tip-up aloft) as he demonstrated the special technique called for in successful ice fishing. Parking, as might be expected, right, was at an absolute premium! Arriving very early guaranteed a spot.



CLINIC: " . . . a group meeting devoted to the acquiring of special skills or knowledge in a particular field" (Merriam-Webster)

Rose Valley Lake Ice Fishing Clinic

photos by Russel Gettig, Staff Photographer

The creation of Rose Valley Lake brought something relatively new to Lycoming County last winter: ICE FISHING! Undoubtedly ice fishing wasn't new to all anglers in the area, but it seemed reasonable to assume that a substantial majority would be less than proficient in the art — and ice fishing is just that!

First of all, getting to the fish — that is, breaking through the lake's cover of ice — can be a painless or painstaking chore, depending upon how it's approached. Although many an ice cream freezer has been packed with ice chopped from a nearby pond with an axe, newcomers are apt to try this method, the poorest of all, to make a hole in the ice. A "spud" bar that's both too narrow and too dull is probably next poorest; but, take an extremely sharp and well-shaped spud bar, or a sharp auger, and it's no chore at all — especially with the latter.

Then what? Well, to the initiated, they just go about doing what comes naturally — or seems to, at least: sound the lake's depth, rig tip-ups or jigging rods, and go to it. But, as in any other form of fishing, there's much to be learned if you're doing it for the first time.

So it was last year, having this in mind, that Fish Commission personnel set up an Ice Fishing Clinic on Rose Valley Lake. Waterways Patrolman James Lauer and his deputies, assisted by Supervisor Miles D. Witt and Assistant Supervisor Paul Swanson from the Northcentral Regional Office, in cooperation with the Blair Sporting Goods store in Lock Haven, put the whole thing together.

Splitting the chores, PFC personnel provided the instruction — demonstrating the use of proper equipment, technique, etc., and the Blair Sporting Goods folks providing prizes and refreshments in the form of free coffee and "Sloppy Joes" for somewhere between 600 - 700 people! Prizes were awarded for the largest fish caught, the most fish caught (in both a Senior and Junior division), plus an ice auger as a door prize . . . the absence of a "door" on Rose Valley Lake notwithstanding!

The clinic last year was scheduled to begin at 11:00 a.m. and end at 3:00 p.m., but many arrived at the lake as early as 9:00 a.m. and stayed until dark. A tremendous success, to say the very least, it will be repeated again this year on January 24th with Blair Sporting Goods offering prizes totaling \$500.00! Lots of luck, boys!

(More photos, next two pages.)



Jeff Reeder and Keith Eilison made the trip to Rose Valley Lake from Montoursville and were rewarded with a fine catch of pickerel, left. Opposite page: Tyrone Lauer's pickerel was a prize winner; no wonder he's smiling. Tyrone is one of Waterways Patrolman James Lauer's five sons. Unfortunately we can't identify the instructor demonstrating the use of the ice auger, far right, but from the attention he's getting from the onlookers, he knew what he was doing!



Even with nearly 700 fishermen on the ice, Rose Valley Lake was far from being crowded as this photo of but one corner of the 360-acre lake would indicate, above. A homemade tip-up was used by Dorance Frymire, Jr. to land the pickerel in the photo, right. His fishing companion was Bob Barns. Opposite page: "To the victor belongs the spoils!" At the Rose Valley Lake Ice Fishing Clinic they also took home the prizes, too. That happy group must have known what they were doing!







That trout was to put a smile on Mary Brumbaugh's face that would last all day! Group leader Kathy Hartle, below left, assists Norman Troutman lower bait. Waterways Patrolman Edward Brown, below right, checks Ron Delia's progress.

Real Cool Fun!

Last year, a group from the United Cerebral Palsy of Northcentral Pennsylvania, Inc. Adult Developmental Center was treated to a day on the ice at Parker Dam Lake, in Clearfield County. Hosting the event was DER's Park Superintendent, Scot Streeter, with technical assistance provided by PFC's Waterways Patrolman Edward Brown.

Everyone took along a box lunch; but, since the fish were quite cooperative, an on-the-spot fish fry was held and each angler got a taste of the freshest fish ever!

Did they have fun? Staff Photographer Russell Gettig spent the day with the group and recorded the happy mood of the day in the pictures on these two pages; see for yourself!





Serena Martz, above left, gets instruction from Park Superintendent Scot Streeter, while WP Edward Brown examines fine brook trout as Norman Troutman and Theresa Jordon look on. Don Lundblad concentrates on his fishing!



Above: It was a very congenial fishing group who found great comfort later as they gathered around a hot fire. Below left: Freshly caught fish provided a tasty treat! Right: Kathy Hartle, group leader, baits up.



CO-OP NEWS

by Bill Porter



Blairs Mills Nursery's elaborate intake system greatly reduces debris problems.

Placed under observation in 1972, the Blairs Mills Sportsmen of Huntingdon County have been adding their trout production to county waters since 1973. The road has not been an easy one, but the club has prevailed and not only has it overcome its problems, but it has improved its site in the process. Let's take a closer look at this club.

Initially, the raceway was a fifty-foot cement block affair, using eight-inch block with a cement apron or lip at the lower end to reduce erosion from the nursery's run-off water. The club, at the time of the original construction, left unfinished block ends and reinforcing rods to make the job of tying in an extension a better one.

The intake system included two pipes and a series of bulkheads which proved quite satisfactory. In fact, this arrangement, with only slight modifications, is the pattern being recommended by the Cooperative Nursery Branch personnel today. This speaks well for the club's construction and planning.

And while we are on this phase of the story, the concern for diverting excess water was taken into consideration and a channel was created parallel to the hatchery facility. This ditching effect carried the water around and below the nursery unit without affecting the intake system and controls. The intake system itself was housed in a rather elaborate slat box that reduced the debris problem, which was further reduced by a floating plank device in front of the box. Overtop was

screening as a final construction effort to insure leaf and dirt-free water for the nursery's raceway. All in all, the planning and construction of the Blairs Mills nursery seemed to spell success.

But there were some problems with the first year of operation being no exception. In the bi-weekly report from Bob Brown's office was this notation: "Blairs Mills Sportsmen lost 50% of their brown trout fingerlings to a bacterial infection. The remainder responded immediately to a terramycin fortified diet." And, the trouble didn't stop there. On a later year, there was another severe fish loss, but the important issue is that the club continued its efforts and is still in business raising trout for Huntingdon County's waters.

Which leads to the waters stocked: Tuscarora Creek, including the Little and Upper Tuscarora branches, as well as other smaller streams, receive the club's trout. Basically, these fish are browns although some brook trout have been produced by the Blairs Mills Sportsmen.

And it is about time that we mention some of these sportsmen. First, an appreciative nod goes to property owner, Joe Bruss, who has made the site available for the project. Then Jeff Hornsby, as the original feeder and nursery manager, deserves attention for his efforts in the beginning years of

the club. His place has since been ably filled by Warren McMullen, current club president and nursery manager. Warren's father helps him and the club keeps rolling along.

The club itself is a relative small group which numbered about 35 at the time of our original visit with about 12 of these men actively involved in the construction work. All members pitched in on the financing and material scrounging, which deserves a sentence of its own. The total cost of the raceway was only \$467, a remarkable figure considering the quality of the materials and the amount used. Scroungers were successful and all labor was donated for the project and that certainly speaks well for the club and its local supporters. Membership dues and shotgun block shoots provide operating costs and the nursery manages to keep its head above financial waters, to play around with an old cliché.

And, thus, it would seem that as long as the mountains don't come tumbling down and Hewey Run Springs continues to flow, there will be some additional trout raised for the fishermen plying their craft in the rugged terrain of Huntingdon County. A final tip of the hat is in order to the Blairs Mills Sportsmen and their continuing struggle against a variety of problems to improve the chances of fishermen using their area.

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

Buying new tackle brightens the winter season for the angler. Helpful hints for the shopper make up this issue of the *"Angler's Notebook."*

For all-purpose fishing, a six-foot casting or spinning rod is good, and an eight-foot fly rod will do the job most of the time. Of course, there are specialty rods, such as ones for trolling or handling big streamers and bucktails; or, casting large plugs and spinners, and it is wise to consider the type of angling you will do with your new rod.

Balanced rods and lines are essential in fly fishing. The matching line size is marked on many rods, and reliable sporting goods dealers can make recommendations for rods not so marked, or can check the rod action to determine the proper line size.

Most commonly used leaders are 7½- or 9-foot-long, with tippets of 3X or 4X, but the wise angler will also have some leaders tapered to 5X or 6X for very small flies. Leaders used in fly fishing for bass should also be 7½- or 9-foot-long, but with heavier tippets, usually 1X or 2X.

Fit is extremely important in waders. If they are too large, they will crease and wear out on the creases. If too small, they will be very uncomfortable. Test the fit for yourself. Don the waders, then stand with one foot on the floor and the other on the seat of a chair. Then you can easily determine if they are comfortable, or too large, or too small.

Three types of plugs are needed for bass fishing. You should have some that float on the surface, some that run shallow in the water when retrieved, and still others that dive and work deep.

Spinners in a variety of sizes are essential. To illustrate, you would not expect to catch bluegills on a big musky spoon, and you certainly would not interest a musky in a size "O" spinner.

Fishing reels are made to perform specific functions. There are automatic and single-action reels for use with fly rods; both serve well. For the lure caster there are level-wind casting reels, open-face spinning reels, and closed-face spinning reels; all are effective. The angler must choose the reel he can use most comfortably and effectively.

Want to add a new item this year? Get a notebook and begin keeping a fishing diary. Make entries at the end of each fishing trip and include such data as weather and water conditions and lures or baits used successfully. Include, also, notations of especially "hot" fishing spots. Reference to this material can make your fishing more successful in subsequent seasons.

During the winter fish in cold northern waters take very little food. The cold temperature of the water slows digestive processes of the fish.

Pike and pickerel will take streamers, but not usually the smaller models used in trout fishing. A good streamer for any member of the pike family should be four- to six-inches long. Yellow, white, red and black are good colors.

Did you ever wonder why a baitfish will attract bass or trout in an area where there are many small fish of exactly the same species as you use for bait? The reason is that your bait fish is attached to a hook and at least partly disabled and it therefore is much easier prey for the predator fish.

Leader tippet strengths are keyed to the sizes of flies or other lures that will be used. A nationally known manufacturer uses these tippet standards: OX for flies Sizes 2 to 1/O; 1X for 4, 6, and 8; 2X for 6, 8, and 10; 3X for 10, 12, and 14; 4X for 12, 14, and 16; 5X for 14, 16, and 18; 6X for 16, 18, 20, and 22; 7X for 18, 20, 22, and 24.

Top colors in bass lures are argued and debated, but tests have established that, so far as attracting fish is concerned, red ranks first, yellow places second, and green is in third place.

Try using styrofoam in making floating bugs for bass and bluegills. It must be handled carefully to avoid breaking, but it is very light and will float well. It can be painted various colors with lacquer, and the body should be firmly cemented to the shank of the hook.

Bucktails and streamers and live minnows account for most of the trout of really lunker size. Wet and dry flies and nymphs account largely for fish from 15- to 20-inches long. Lunkers like lots of food at one gulp.

Discolored, tarnished spoons are not as effective as those that are clean and shiny. The attractiveness of a spoon depends largely on the flash it creates.

Two men fishing together will do well to begin fishing with different flies or lures. Then it will take only half as long to determine what the fish will take.

A handy pocket case for carrying such odds and ends as hooks, split shot, snaps and whatnot can be made from an old spectacle case. The case fits easily into a pocket, and the spring-hinged top always remains closed.

Fallfish can furnish a lot of sport, for they are strong fighters, especially on light tackle. These fish, also called white chubs, will take almost any fly used in trout fishing and also strike readily on live bait. Besides, many fallfish are of really respectable size.

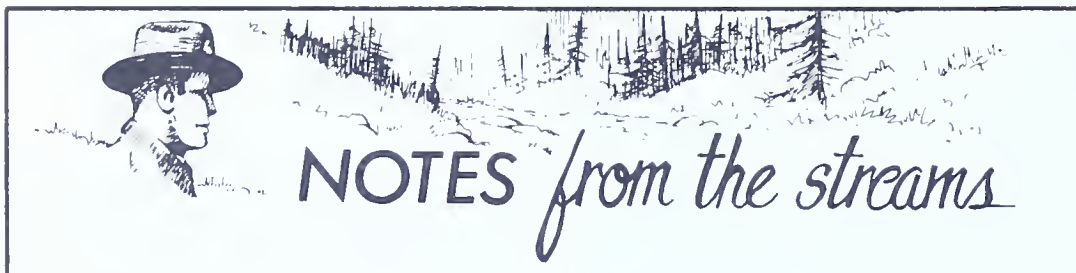
Attach a narrow pork rind strip to a spoon dressed with hair or feathers. The fluttering pork rind will give the lure additional attraction.

Best lures made won't catch fish unless they are used properly and in the right spot at the right time. Try to learn the areas where fish rest and where and when they feed, and make the lure behave like the natural forage it imitates.

Fish migrate from deep water resting stations to shallower water to feed, and when they do they can be caught on lures fished at medium depths.

The most practical sizes in trout flies are 12, 14, and 16. Dry flies should be on light wire and have glossy hackle, stiff tails, and wings of equal length. Wet flies should be on somewhat heavier hooks, with sparse, soft hackle, wings that slant toward the tail, and tails that are sparse and flexible. Streamers should be from 1½- to 3-inches-long, with wings only slightly longer than the body.

Angling accessories are available in vast profusion. Some, frankly, are gadgets with little practical use. But, essential to every tackle kit are such angling tools as split shot, sinkers, bobbers, snelled hooks, loose hooks, clippers, very short and light wire leaders, and a sturdy knife. A stream thermometer is a valuable item of tackle, along with a landing net.



FAR FROM HOME!

Talk about the many situations that a waterways patrolman gets into — this is one of the most unusual. Deputy Geelen and I were patrolling one of my remote streams and we came across a very large white-faced cow in the area. The cow was easily five miles from the nearest farm, deep in a wooded area. We were shocked when coming upon the beast in this environment. By means of our radio we were able to locate the owner through the County Control System. Deputy Geelen spent most of the afternoon trying to keep the animal confined to an area, as I did. The owner finally came and herded the cow to an area where he could be trucked home. A very happy and grateful individual was the owner for the return of the cow.

*Stanley G. Hastings
Waterways Patrolman
Cameron County*

SECOND COUSINS?

Overheard in a truck stop along I-80: One trucker talking to another said, "I see a lot of white cars on my travels with the 'Keystone' on the door that spells 'Pennsylvania Fish Commission.' Are these guys related to the *regular Smokey*?" The second trucker remarked, "I think so, I guess you could call them **Smoked Fish!**" I didn't know if I should laugh or cry!

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

FIGHTING INFLATION!

It pays to observe because if you were told something that didn't seem to be within reason, you would not believe it. I was watching a shore fisherman on Lake Wallenpaupack one evening and observed him throw something out into the water. It appeared like a metal object that was bright silver but I could see no rod. He had his back to me and I saw this action several times.

When I was about to approach him, he made a sudden jerking motion and I was beginning to think he was one of those fellows that row their boat down a dry street, when I saw a splash out in the

water. When I got to him he had landed a nice 22-inch walleye!

In checking him and his equipment, I found he was using one of those fold-up rods about a foot long; and, for a lure he had made his own. It consisted of a stainless steel spoon, cut off at the handle and the round part was attached to the blade of a stainless steel knife also cut off at the handle and a set of treble hooks on the end!

I never saw such a lure and mentioned this to him. He said that he had taken some garbage to a dump and saw the spoon and knife on the ground there and decided to do something with them. The only cost involved with the lure was his time and I know it works, I saw it! And, when he went to place the fish I saw him catch on his stringer, he had two other walleyes which he claimed to have caught on the same lure! Maybe fish stories are not all tall stories after all.

*Joseph E. Bartley
Waterways Patrolman
Pike County*

PROOF POSITIVE—

While on patrol last October, I stopped to check two fishermen at a beaver dam. I asked, "How's the fishing?" They replied, "Great!" When I checked their catch and measured 7 pickerel, ranging in size from 19- to 22-inches, I had to agree. The men continued to explain how they happened to try this spot. They stopped to talk with another fisherman who was fishing from shore and had a problem. He had hooked a fish, the line broke, and his bobber was still moving about, apparently with fish attached. The two men decided to help out by launching their boat and retrieve his line and bobber. A large pickerel shook free as the line and bobber were lifted from the water. So, needless to say, these fishermen decided to fish and were rewarded with a fine catch of pickerel.

Maybe we should all learn a lesson from this, if we help each other, we can be rewarded in many different ways. In departing, my words were, "Remember: Fishing is Great, in the Keystone State". They agreed with me!

*Richard R. Roberts
Waterways Patrolman
Susquehanna County*

TRY THIS—NEXT FALL:

I recently took a busman's holiday and went fishing in the Susquehanna River on a beautiful fall day. The river was clear as crystal, didn't have to swat mosquitos, flies, etc., had no competition from other water users. I fished for about three hours and caught six smallmouth bass — not record breakers — but got enough boneless filets for two full meals for my wife and me, plus a few pieces for breakfast. On the way from Tunkhannock to Towanda where I caught the fish, a distance of forty odd miles, I saw only three other boats on the river. I feel strongly that during October and November is the best time of the year for fishing . . . just can't understand why more people do not take advantage of this wonderful fishing we have in our backyards.

*Stephen A. Shabbick
Waterways Patrolman
Wyoming County*

DIFFICULT TO PREDICT—

I received a telephone call from a fisherman in Erie, our second largest city in Pennsylvania, inquiring when the smelt would run up the feeder streams from Lake Erie. I explained that I couldn't give the exact time, but it usually occurred when the lake temperature is above 40 degrees and the streams are about 50 degrees. This would usually take place in the latter part of April or first of May. If there is a school of smelt off the Pennsylvania shore at that time, we *should* have a smelt run. After all this *theorized* information, the fisherman's reply was, "Can't you give me a name or telephone number of someone that could give me the *exact* date?"

*Norman E. Ely
Waterways Patrolman
N/Erie County*

"HOW LONG DO FISH LIVE?"

This is a question asked us many times by interested anglers. The most frequent answer given is, "It depends." Fish in their native habitat, fighting such daily rigors such as competition from other species, predation, stress during spawning periods, pollution, and fishermen's "hooks," all add up to a fairly short life under natural conditions for most fish. Under unnatural conditions, it can be a much different story. Some of our brood fish, given tender loving care at our hatcheries, have a rather long life span.

*James T. Valentine
Waterways Patrolman
Huntingdon County*

SET UP!

While on night patrol of the Yellow Breeches Creek last year, on the Friday evening prior to opening day of trout season, Deputy James Cree and I observed what we thought were some fishermen doing some early fishing. They were camped along the stream with a tent and stove and were prepared for the opening hour. However, upon checking their camp, we found a rod and line in the water. Feeling sure that we had found a violation, I advised Deputy Cree to reel in the line and I would discuss the matter with the fishermen. As the fishermen gathered around, Officer Cree reeled in the line and we had the catch: *a fish net bag with three cans of soda was tied to the end of the line!* The fishermen told us that they had put them there to keep them cold. However, there are two Fish Commission officers that have a different opinion!

*Perry D. Heath
Waterways Patrolman
Cumberland County*

THE "COMMITTEE"—

After filling the float boxes at the upper end of Penns Creek during the stocking of the stream in my district last year, I was waiting downstream with two of my deputies and a group of men while members of the Lykens Valley Camp brought the floats down distributing the fish in the stream.

I was at the fish truck with two deputies when I heard a loud cheer come from the stream. I went down to see what the commotion was about.

Young Sam Hutchinson, age 6, from Altoona, had been fishing when we arrived and hadn't had any luck. The "committee" waiting for the floats to continue the stocking took the lad's plight to heart and eagerly offered more than enough help to the boy.

After about five minutes of adjusting depth of the bait, the bait itself, and various casting techniques, Sam landed a nice rainbow trout which he quickly creeled with a broad grin on his face.

Seeing this type of activity on the stream is very gratifying. The benefits received by all involved cannot be counted. Fishing continues to be this type of activity with cooperation and camaraderie being such a big part of the sport. I'm sure young Sam will not forget too soon the day twelve adult strangers took time to give him a hand, and I'm certain his enjoyment in landing the fish was more than equalled by that of the "committee."

*Larry R. Baker
Waterways Patrolman
Mifflin/Juniata Counties*

TOOK THE "FIFTH"!

While stocking trout, a sportsman prophesied out loud, **"Big enough to hook, big enough to cook!"** When I asked him for his name and address that I might quote him on that, he politely refused.

*Robert Lynn Steiner
Area Waterways Patrolman
Northwest Region*

DRIVE RIGHT UP!

I have received many compliments and inquires about the cover of the 1975 April *Angler*, as to where this area is located and whether it is open to fishing. This same area was written up many years ago as a very fantastic fly area in one of the national magazines. One would think by looking at the photograph that we are looking at a stream far from civilization. In truth, Route 487 passes within fifty yards of this spot.

*John W. Weaver
Waterways Patrolman
Columbia County*

GULLIBLE GULL!

While in the process of stocking Eltons Sportsmen's Dam, I heard quite a commotion going on at the lakeside, and decided to see what was going on. The fishermen were shoulder-to-shoulder and were getting quite excited over the trout that was stocked in front of them, and so was an inland sea gull. The gull would make a pass every time it saw a piece of bait being cast into the lake by a fisherman. It just goes to prove that not only people get excited on stocking days!

*Robert L. Kish
Waterways Patrolman
Cambria County*

THAT'S LUCK!

While doing plainclothes detail in Warren County for Officer Sowers, I witnessed a fisherman foul-hook a nice brook trout. He was about to keep it when another fellow across from him said, *"You better not keep that trout or it will cost you."* He then released the trout, saying it wasn't worth a fine, and besides, these trout are *not fit to eat*. The next trout he caught was a big brook trout and got off of his hook at the edge of the stream. He got both legs wet and boots full and arms wet trying to get that trout before it got back into the water. He didn't get it!

*Bernard D. Ambrose
Waterways Patrolman
Elk County*

IT'S GOT TO BE A FIRST!

Mr. Ed DeHaas, of Sheffield, caught a brook trout, a brown trout, a rainbow, and a palomino without moving from one spot! Where? On Tionesta Creek!

*George R. Jones
Waterways Patrolman
W/Warren County*

NO STOPPING THEM!

I certainly must applaud the dedication of some of the sportsmen who turn out to assist us with our preseason stocking. Some time ago, I stocked Bobs Creek in the Blue Knob area. On the day we stocked, the temperature at stocking time was right around 20° with winds gusting around 50 mph! In addition, there was about 4 inches of new snow on the ground which was being whipped by the gusting winds. At times the visibility was near zero. When I arrived at the meeting place, I did not expect to find anyone there to assist with the stocking. Instead, I found a few dedicated sportsmen ready to stock Bobs Creek regardless of the weather.

*Walter A. Rosser
Waterways Patrolman
Blair County*

"TALKING" TURKEY!

All who spend any time in the field certainly know the value of using every bit of cover and camouflage to approach fish or game. Recently, while fishing for "native" trout in a mountain stream in Juniata County, I was really surprised to hear a turkey "talking" within a few feet of me. I was even more surprised when I saw the source was not a turkey, but a fellow sportsman trying to locate a likely place to get a gobbler during the upcoming spring turkey season! You and I can imagine how he felt when I said, **"Hello there!"** because he just up and walked away without a word.

*Frank Kulikosky
Asst. Supervisor
Southcentral Region*

THE "WARDEN" KNOWS—

My wife received a telephone call recently from a woman who wanted to know where to seine minnows. She stated that her family was new in the area and she thought the best way to find a good stream to seine minnows would be to call the "fish warden." She thought he would know just where they had been stocked!

*Bud Flyte
Waterways Patrolman
Somerset County*

FLY TYING

Making a "Hair Tamper"

by Chauncy K. Lively

photos by the author

The use of hair in dressing many types of flies, from bucktail streamers to hairwing dries, has long been a significant part of the craft. With the growing scarcity of good quality hackle, not to mention its cost, the role of hair will undoubtedly be further expanded because of its wide availability and consistency in quality. Indeed, there's hardly a four-legged critter around (even milady's cat!) that hasn't hair of some usefulness to the imaginative fly-tyer. Not that I'm advocating roaming the neighborhood with shears in hand, ready to relieve some hapless pet of part of his coat. The point is, there are many types of hair . . . and, I'm sure, some that have not yet been tried . . . which

lend themselves perfectly to fly-tying.

One trouble with hair is its messiness in use. Once a bunch is clipped from the hide the short hairs and fuzz must be removed and discarded. Then, in the interest of neatness when making hair wings and tails, the tips should be matched. This was always a tedious chore for me because it meant removing the longest hairs from the bunch and rematching their tips with those of the shorter hairs until some semblance of evenness was achieved. Invariably, a few hairs were dropped during the operation and even with a catch-basket underneath the vise there were always a few hairs floating through the room as if under their own power. Of course, many fly-tyers are neater than I — and to them I doff my cap. It is only for the multi-thumbed Klutzes,

surface. When the hair is withdrawn from the tube the tips are evenly matched. This procedure works well with any hair that is reasonably straight; kinky hair may require more vigorous tamping.

I used vinyl tubing because that's what I happened to have on hand but metal or rubber tubing should work equally well. Tubes of various diameters and lengths will accommodate hair bunches in a range of sizes. Those on my own HAIR TAMPER are ½" O.D. X 1", ⅜" O.D. X ¾", ⅜" O.D. X ½" and ⅜" O.D. X ⅜"; however, variations from these dimensions may be made and your own requirements should be your guide. Each tube should be long enough and of sufficient diameter to hold a specific bunch of hair upright without spilling.



Three hairwing types (left to right): Robber Fly, 'Hopper and Michigan Stone.

like me, that I am suggesting a partial solution.

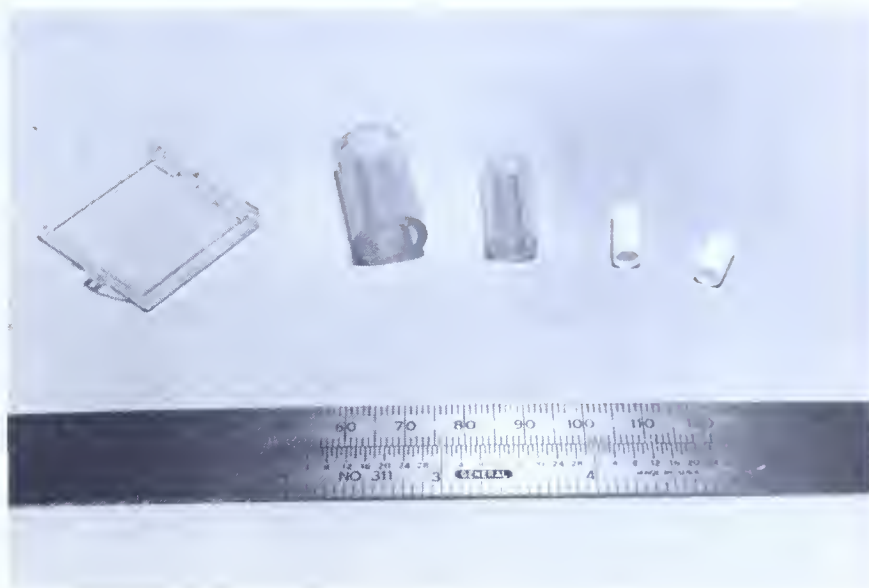
Several years ago I made a little gadget to assist in the preparation of hair for hairwing flies and it has taken much of the tedium out of the operation. It has reduced the mess around my fly-tying desk by perhaps a degree or so . . . but more importantly, it has made the even, uniform bunching of hair a quick and easy process. The HAIR TAMPER was made of odds and ends found around the workshop: vinyl tubing of three different diameters and a small plastic box. The tubing was cut to four lengths and these were set upright in the corners of the shallow lid of the box. In use, a bunch of hair is cut from the hide and the short hairs and fuzz are removed from the butts. Then the bunch is inserted into the appropriate tube, tips down, and the HAIR TAMPER is given a couple of sharp raps against a hard

The smallest tube is utilized for mixing hackle fibres to be used as wings on tiny spent spinners. It is also useful in matching muskrat or mink guard hairs used as tails in small dry flies. The lid of a small plastic box is an ideal base for the tubes but it should be at least as shallow as the depth of the smallest tube. Actually, the tubes could be used individually without attaching them to a common base but in this event one end of each tube should be plugged. Fixing the tubes to a base is perhaps a little more convenient, however, because it combines everything into a one-piece unit.

The HAIR TAMPER won't dress one's flies for him but it will shortcut the dreary process of preparing hair for making neat, uniform wings. Whether neatness matters to a trout is difficult to ascertain, but it should matter to the fly-tyer/angler for it fosters confidence in the fly. That's important, too.



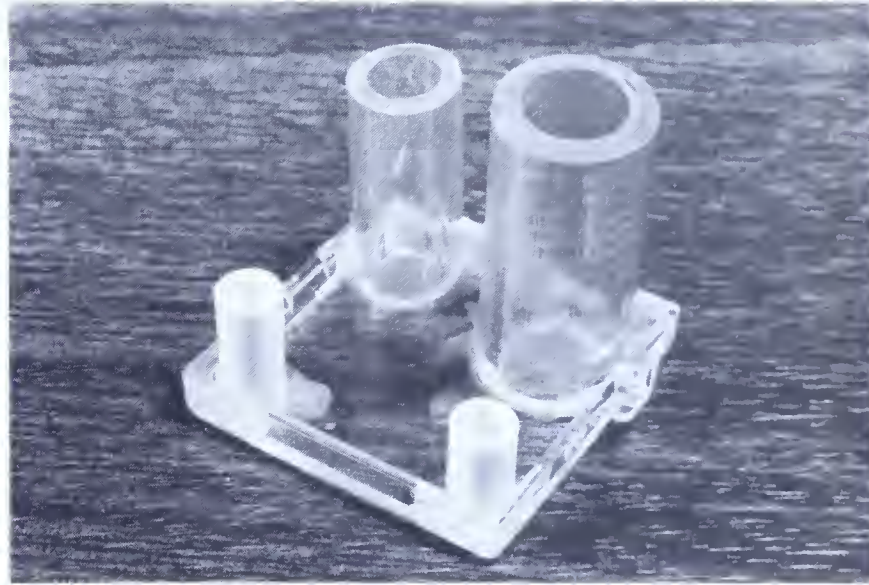
Tools and materials: A sharp razor blade, plastic cement, a small plastic box with a shallow lid and plastic tubing of three diameters. (See text.) Remove the lid of the box



and cut tubing into lengths of 1", $\frac{3}{4}$ ", $\frac{1}{2}$ " and $\frac{3}{8}$ " respectively.



With plastic cement set the four cut tubes upright in the corners of the box lid. Solvent-type cement is the kind that softens the plastic. This works best here. Your finished



Hair Tamper should look like this. Be sure the cement is dry before using.



Using the Tamper: After you have cut a bunch of hair of the diameter required, remove the fuzz and short hairs from the butts. Then insert the hair, tips down, in the appro-



ropriate tube and tamp the base firmly on the table top, as shown. After tamping, when you withdraw the hair from the tube the tips should be perfectly even.

Old Patrol Boats Never Die...

they're just "phased" away!

by Alan MacKay
Marine Services
Specialist

For most folks this time of the year hardly brings thoughts of water-related activities to the forefront; but, for those of us in the business, it must go on regardless of how we happen to feel about it at the moment. The winter months are perhaps the time of most hectic activity, as we attempt to finish off all the leftover projects that somehow never got completed during the year past, while at the same time trying to look ahead and plan for the coming year.

A boat, during a Pennsylvania winter, regardless of its size, is a bulky, inanimate object that seems to get in the way no matter where you've put it. If it's in the garage, it's invariably in front of something that you really need to get at and just as you decide that you have to move it, one of the trailer tires has gone flat. Should your mind happen to wander toward actual pursuit of the sport, it generally consists of wistful glances through a boating publication, after you've thrown another log on the fire.

If, however, you're able to rouse yourself to the occasion, there are some pretty good deals available on boats, motors, and equipment at this time of the year. 'Tis the season for "leftovers" and many a marina is anxious to clean house in preparation for new spring arrivals. Post-holiday depression really begins to sink in about now, coincident with the arrival of the bills for the festivities past. But, should you be able to scrape a few dollars together, this time of year is definitely a buyer's market.

One of the questions I'm most frequently asked is, "What happens to Fish Commission boats once they're retired from service?" Boats, like all other state surplus equipment, are offered for sale to the public via the submission of written bids. The procedure is as follows:

All bids must be submitted on pre-printed "BID PROPOSAL FORMS" and must be returned in the envelope provided with that form. A security deposit, amounting to at least 25 per cent of your bid must be submitted with the bid. The deposit must be in the form of a certified check, cashier's check, or money order, made payable to the "Commonwealth of Pennsylvania." *Personal checks and cash are not acceptable.* Security deposits will be returned to unsuccessful bidders. The security deposit of the successful bidder will be applied to the purchase price. All boats are sold on an "as-is, where-is" basis.

The description of each item will be stated to the best of our knowledge and belief. However, neither the Fish Commission nor the Commonwealth will warrant or guarantee the serviceability or the suitability of the property listed. *All bidders are invited and urged to inspect the property prior to the submission of bids.* Final pay-

ment must be made within ten days of the award to the successful bidder. Upon receipt of payment the purchaser will be given title to the property, and he then has ten additional days to remove the property from the sale site.

That's how it works. A number of people have commented to me that they would have liked to submit a bid but they didn't know anything about it. In the past, we've tried to announce the sales via press releases, but often times the notice is overlooked. So, as a truly magnanimous gesture, I'm going to print the surplus inventory here. Please understand, this DOES NOT constitute an advertisement, endorsement, or encouragement. It's just a list.

As we do not have a central storage facility, these craft are pretty much strung out over the state. They are listed here by the general region in which they are located.

NORTHEAST REGION:

(1) 1970 Evinrude Explorer inboard-outboard, length 16'2", equipped with 155 hp V-6 engine and OMC sterndrive. Hull condition: Fair. Engine: Inoperative.

(1) 1971 MFG Caprice inboard-outboard, length 18'2½", equipped with 165 hp Mercruiser sterndrive. Condition: Fair.

SOUTHEAST REGION:

(1) 1968 Silverline inboard-outboard, length 18', equipped with 160 hp Mercruiser sterndrive. Condition: Hull: Fair, Engine: Inoperative.

NORTHWEST REGION:

(1) 1971 MFG Caprice inboard-outboard, length 18'2", equipped with 165 hp Mercruiser sterndrive. Condition: Fair.

(1) 1968 Glastron V-156 outboard runabout, length 15'2". Hull only, no motor available. Condition: Poor.



Commission patrol boats must be maintained in top-notch condition to perform all-season enforcement work.

SOUTHWEST REGION:

(1) 1972 Correct Craft Jet, length 19'11", equipped with 330 hp Chrysler engine, Jacuzzi jet unit. Condition: Good.

(1) 1970 Evinrude Explorer inboard-outboard, length 16'2", equipped with 155 hp V-6 engine and OMC sterndrive. Condition: Fair.

(1) 1970 Evinrude Explorer inboard-outboard, length 16'2", equipped with 155 hp V-6 engine and OMC Sterndrive. Condition: Good.

NORTHCENTRAL REGION:

(1) (1) 1968 Glastron V-156 outboard runabout, length 15'2", equipped with 1971 80 hp Mercury engine. Condition: Hull, fair; engine, fair.

(1) 1968 Glastron V-156 outboard runabout, length 15'2". No motor available. Condition: Poor.

(1) 1968 Glastron V-156 outboard runabout, length 15'2", equipped with 1968 Johnson 65 hp engine. Condition: Hull, poor; engine, fair.

SOUTHCENTRAL REGION:

(1) 1968 Silverline inboard-outboard, length 18', equipped with 160 hp Mercruiser sterndrive. Condition: Fair.

Should anyone have an interest in submitting a bid for any of the surplus boats, drop us a card, requesting a bid form *for the region in which that boat is located*, and we'll forward you the necessary information. The bid lists should be ready by about the first of March.

by Gene Winters

There is no word in our entire language that strikes fear and panic like the cry, "**FIRE!**" Terrible as it is on land, it is laden with added dangers and complications when it occurs within the small confines of a boat upon the water.

Always present on any motorboat are the three necessary ingredients for a fire: fuel, spark and air. Since fuel vapors are heavier than air and can seep into compartments, it has long been necessary for authorities to promulgate *which* craft and under *what* conditions vessels shall be required by law to carry approved fire extinguishers; and, if so required, how many, what type and size. If you don't know the legal requirements pertaining to fire extinguishers, if applicable, for your boat, better check it out now! But, for the scope of this article, let's assume you have that basic knowledge.

You should also know that fires (and fire extinguishers) are grouped into three classes:

CLASS A — fires in materials such as wood, paper, bedding, etc.

CLASS B — fires of flammable liquids such as gas, oil, grease

CLASS C — fires involving electrical equipment, wiring, etc.

It is also important to know that **only class B extinguishers are approved for marine use.** There are three dif-



Left: Operating instructions and a wealth of helpful information are on your fire extinguisher's label. Read it before a fire strikes. Right: Every crew member in the author's family, including the youngest, knows how to operate an extinguisher and "fight a fire," as well!

ferent extinguishing agents that may be used in class B units, but the dry chemical type is easily the most popular on boats today. It is convenient to store and easy to use, has a relatively low initial cost, low recharge cost and spare cylinders are available that may be screwed onto the old discharge nozzle and valve assembly. These extinguishers, if manufactured between 1962 and 1965, contain the wording "Marine Type USCG Type _____ Size _____." Those made since 1965 must have the above label *plus* a Coast Guard approval number (162.068/ _____). Extinguishers are also rated by a size numbering system (I, II, III), which basically determines how long it will operate before discharging its contents and the range/distance over which it will propel its extinguishing agent. All class B dry chemical extinguishers now being manufactured have a gauge or other indicator to show pressure charge (or lack of it) in the cylinder. Older,

nongauge dry chemical models, while they may still be legal, must be checked by very careful weighing every six months and should bear an inspection record tag. All fire extinguishers aboard must, of course, be in good and serviceable condition. (By the way, it is possible to buy extinguishers with a dual B-C classification, but all class B extinguishers have some value in fighting an electrical Class C fire. For class A fires (paper, wood, cloth, etc.), plain old water is much more suitable than either B or C extinguishing agents.)

Regardless of type, *all* fire extinguishers should be checked at least every six months, preferably by weighing. If it's a pressure gauge model, tap the gauge lightly to make sure it is not stuck. Shake it a bit from time to time to loosen the dry chemical inside and keep it from settling and hardening. Check the exterior for rust and corrosion, remembering the contents must be kept under pressure and the last thing you need is for a cylinder to burst. If rusted, clean it good and repaint it. You may also notice a slow, gradual drop in gauge pressure over an extended period of time. This is not necessarily a manufacturing defect; all will eventually lose pressure because



of unavoidable leakage through the "O" ring seal. All fire extinguishers can be checked by weighing (read the label on yours) but don't try it with the bathroom scale; such scales are not accurate enough and cannot be read to the degree necessary. *As little as one-quarter ounce weight loss indicates the extinguisher needs servicing!* Even if my own semi-annual inspections indicate all extinguishers are okay, I still have them checked and serviced by a professional firm every two years. In addition, I remove one from service each year (the oldest, naturally) and replace it with a new one. The one removed is used for "practice" at the season's last barbecue. Every member of the family (on a rotating, yearly basis) gets a turn actually putting out a small fire. Try it and watch the expressions on your family's faces when, in actual operation, the point is vividly driven home that the small extinguisher usually carried on boats normally *discharges all its extinguishing agent in just 8 - 12 seconds of operation . . . then is empty!* (This

may surprise even a few "captains".) Read the label for operating instructions and remember, because of its limited contents and time of operation, the extinguishing agent must be directed *at the base of the fire*.

Proper location of extinguishers is very important. Don't place them right on top of the spot where a fire is most likely to break out unless you plan to reach into blazing, searing flames to grab the extinguisher. One ideal location is near the helmsman's seat, within arm's reach. In larger boats, additional extinguishers should be placed in cabins, sleeping quarters, galley areas, etc. Make sure the crew and guests know where they are and how to operate them. *Never* partially discharge an extinguisher to test it or demonstrate it. If you do, chances are high it will fail to operate if and when you really need it. (In some cases, it may take days for the pressure gauge, if it ever does, to indicate that partial discharge.) In addition to "eye-balling" the gauge from time to time, check the nozzle periodically to make

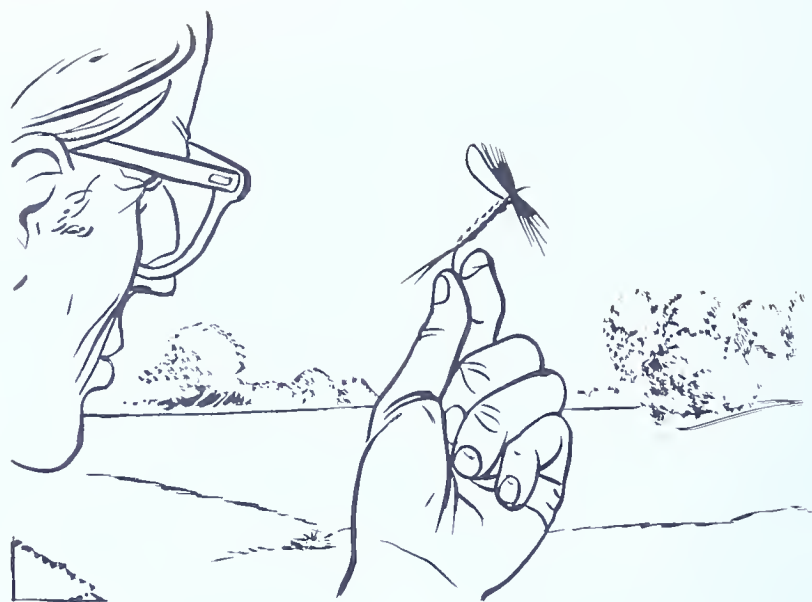
sure no chemical powder is visible in it, indicating a partial discharge. Also make sure the seal, be it paper or wire, is intact. Broken seals may indicate someone has partially discharged the extinguisher without your knowledge.

Another good idea is to remove a fire extinguisher from the craft (temporarily!) and place it in the towing vehicle. A carelessly tossed cigarette has blown back many times and started a fire in the canvas cover or boat itself.

Eight to ten seconds! I wouldn't blame you a bit if you decided to buy an extra extinguisher or two for the upcoming boating season. After all, regulations only specify minimums and under what conditions fire extinguishers are required. Those with powered boats that do not *legally* require an extinguisher may want to think about adding one *voluntarily*. Any boat with a gasoline motor of any type or size has a fire potential of some degree. All it takes is fuel, spark and air under *uncontrolled* conditions to hear the cry, "**Boat on fire!**" pierce the air.

the hatch

by richard l. henry



They were probably father and son, I thought, as they came down the lane. Both wore clean, creased waders and carried slender bamboo rods and reels that sparkled in the sun. The older man squinted through thick dark-rimmed glasses that rested securely on a prominent nose, and below a Tyrolean hat his long, tailored gray hair swept neatly over his ears. Probably a businessman in a metropolitan society and a member of a country club, I thought. And the younger man? Very likely a college student home for the summer. I quickly gathered that both had spent more time playing golf than fishing for trout.

"Good morning, gentlemen. How's the fishing?" the senior angler said as they approached our small gathering. "I suspect that *Ephemerella dorothea* is on the water about this time." He smiled sadistically as we pondered his appraisal of the occasional rise out in the river. "May I suggest that a Pale Watery Dun with a body of urine-stained fox fur is an excellent imitation?"

Beside me a tall old man whom I'll call Jeb spat into the grass. "Danged if I know what they're risin' to," he said, "but whatever it is ain't exactly drivin' 'em wild."

"It must be *Ephemerella dorothea*," the angler said. "This is their season, you know."

The newcomers slid over the bank to the edge of the stream. The older man, not satisfied to let his judgment rest upon mere theory, hurried to examine a natural fly before relegating the capture of trout to the level of a fish market raid. Splashing clumsily into the shallows he grasped for air-

borne insects, invisible to us, that somehow eluded his vigorous efforts.

Old Jeb spat again. "Don't want to get you in trouble," he shouted, "but unless you can walk on the water you got problems. You ain't allowed to wade here." (Wading has since been approved.)

"Oops," the angler gasped, sneaking back to shore.

"Fish-for-fun project," the old man informed him. "Flies only . . . no killin' 'cept for fish over 20 inches, and you ain't gonna be too overburdened with them."

Not long afterwards when I left, both anglers were harmlessly harassing those few rising trout as old Jeb looked on.

Northcentral Pennsylvania is a mecca for trout fishermen because of its many miles of relatively unspoiled water. I was in the area for the week, staying at a tiny settlement named Cross Fork, and fishing Kettle Creek and its tributaries. It was on the newly established FISH-FOR-FUN section on Kettle where I'd been talking to several natives when the two anglers came along. I had left for lunch and to get a couple hours of rest.

Later that same day I'd planned to return to Kettle, but decided first to check on Cross Forks Creek, one of the more important tributaries and only minutes from my cabin. The stream is a good one for small trout and is managed as fly fishing only and a daily creel limit of six trout at least nine-inches long. I parked at the edge of the dirt road and then walked out on a dilapidated bridge from which I could easily observe the stream.

After a while I was aware of an angler below me, and I immediately

recognized him as the elder of the two men I had seen earlier on Kettle. He was busy searching through the compartments of his fly box and hadn't noticed me. Downstream from the angler the long flat pool was quiet, except for a small chub that frolicked in the shallows. Perhaps this evening, I thought, there may be a hatch.

Just then the man's younger companion stumbled through the streamside brush carrying a ten-inch brown trout that in its death throes squirmed feebly in his grasp. He held it out for the older man to see.

"By George, I see you've got a good one there," the man said, his voice trembling with emotion.

"He put up a gallant battle," the young man assured him.

"And what did he take?"

The question was of course inevitable. I must confess that I am not a gambler. At least twice I have passed by "inside" tips on thoroughbreds that were to have amassed for me a fortune, and scarcely flinched; yet had one offered to bet upon the young man's answer I'd have given odds upon my conviction, wagering the sum of my impoverished total worth without thought of risk.

"Pale Watery Dun, with a urine-stained red fox body," he said.

"Ah, I knew it," said the older man. "Excellent imitation of *Ephemerella dorothea*. This is their season, you know."

Several evenings later there was a substantial hatch of mayflies I like to believe was *Ephemerella dorothea*, and the Pale Watery was a good choice. I sincerely hope the two anglers hadn't missed it, even though it was slightly late.

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Angler

the
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26 1976

PHOTO BY STAN LITVAK
FOR THE SECTION

Visit a Hatchery... see how it's done... meet the men who do it!



Sometime in the distant past there were implications that there is such a thing as a "slack" season. There is no such thing! But, of all times of the year, this has to be our busiest time for every one of the 432 salaried people who work for the Fish Commission. This is the time when our stockholders spend a great deal of their time attending club, county federation and division meetings. It is also the time when the "shows" which are prevalent across the Commonwealth are a symptom of cabin fever and the stirrings of adrenaline in the sassafras tea-thinned blood that presage opening day on our trout streams.

The usual contact with our stockholders is the District Waterways Patrolman, and our newly decentralized Area Fisheries Managers. Granted that over 90% of our propagation and distribution efforts are now dedicated to warmwater species, the fringe numbers of license buyers that make up the difference between red and black ink are the catchable trout customers. Most of the stockholders don't even know who provides the most basic material of all: almost 4½ million catchable trout stocked in the waters of the Commonwealth which are called "approved trout waters."

Out of our fourteen fish cultural stations, eight are devoted exclusively to catchable trout (and the fingerlings for the Cooperative Nursery Program). Fish Culturists are the unsung heroes — the people who have no more than three minutes to correct a faulty pump, or a power failure, or a clogged screen. These are the people who, through thick and thin, around the clock — seven days a week, in all four seasons, watch over the costly livestock that we use to enhance the diverse fishing interests of our license-buying supporters.

The logistics of preseason stocking are enough to drive the average person up the wall. One hundred and thirty, or almost 30% of our employees are in a category called "Fish Culturists." And, it is ironic that out of the hundreds of thousands of visitors to our fish cultural stations (hatcheries), very few members of the fishing public realize or appreciate the hard work and dedication that marks the performance of duties by these key employees. Just about March 1, the *Great White Fleet* — 46 tank trucks, carrying our precious cargoes to you, the consuming public, take off to cover over 125,000 miles, with each trip carefully calculated to effect the most efficient stocking plan in the country. Trucks themselves are basic flatbeds with tanks on top of them built from marine plywood and epoxy paints, and equipped with our ingenious pumps — built by our own people.

The Propagation Section has to consider not only the total distance to be traveled, the species that are allocated to the various streams in the stocking areas by water quality, acidity, etc., but the very basic factors such as, "Has the ice gone out of the stream?" "Are the water temperatures hospitable to our precious cargo?" "Has proper public notice of fish stocked been given to our stockholders?"

The Fish Culturists throughout the hatchery system have watched each and every one of those catchable size trout go from egg to almost 9½-inch average length . . . while maintaining the pumps, making sure of proper diet, keeping the screens cleaned, slipping and sliding on the edges of the raceways in freezing weather to make certain that the purchaser of a fishing license has the best available product within our means to satisfy his soul-rejuvenating recreational needs.

Within seven weeks, over 2½ million catchable size trout will have gone out to our streams and will have been spread out as far and as equitably as it is within our ability and knowledge of angler pressures to determine. After opening day, an entirely different problem arrives: *the truck follower*.

If there is anything that parallels the slob hunters depicted on "The Guns of Autumn," it is the truck follower during the in-season stocking. We've even seen them follow garbage trucks painted white . . . thinking they were loaded with trout! We have seen potential stewards of our natural resources from the next generation completely disillusioned by the manners of the truck follower. Youngsters from junior conservation clubs who volunteered to help us float-stock have had their impressions of our generation degraded by watching truck-following slobs cast their lures and bait right into the float boxes as they went by!

In summary, we are so grateful to those behind the scenes who raise, feed, protect and stock trout that are so important to our present management programs that it is difficult for us to express it adequately. It is our hope that our license-buying stockholders and their families might visit with these dedicated but unsung employees at one of our hatcheries. Why not take a tour of one of our installations and get the full spectrum of what goes on before you land that hatchery trout from a put-and-take stream.

To the slobs that end up causing posting of lands of even the most tolerant landowners, who litter stream banks, block access and egress to farmers' fields and streams, know this: we realize that you are probably our worst enemies and we are on your track!

At any rate, this is the "season-before-the-season." The opening day is an artificial one mandated by the logistics that dictate those biological and social persuasions on the original ecosystem. Trout season is just around the corner. We have worked night and day, around the clock, to try to earn your respect and appreciation, and to encourage you to enjoy the best fishing in the East. Get your tackle in order, visit our hatcheries and talk with the men who produce the product you seek. Talk with your District Waterways Patrolman for the best tips on where to go and what to use. And then, as the days lengthen and the season opens up, get out there and enjoy yourself — when you're happy with it, we are too.

Ralph W. Abele,
Executive Director

Pennsylvania Angler

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Volume 45 - No. 3

March, 1976

CONTENTS

Tying Your Own Leaders by Michael Sajna, Jr.	8
Know Your Catfish by John Selcher	10
The Pennsylvania Angler Fishing Citation Program	14
Adopt A Stream - From Vision to Reality by Paul Swanson	16
A Cold Water Primer by Alan MacKay	20

Front Cover: Photographer George E. Dolnack, Jr. came upon Doug Mohrmann giving the Schuylkill River muskies just one last fling before the season closed last year. His favorite spot on the Schuylkill is at its confluence with the Perkiomen Creek, near Oaks. Not taking any chances, Doug uses an 8-foot saltwater spinning rod and 20-pound test line!

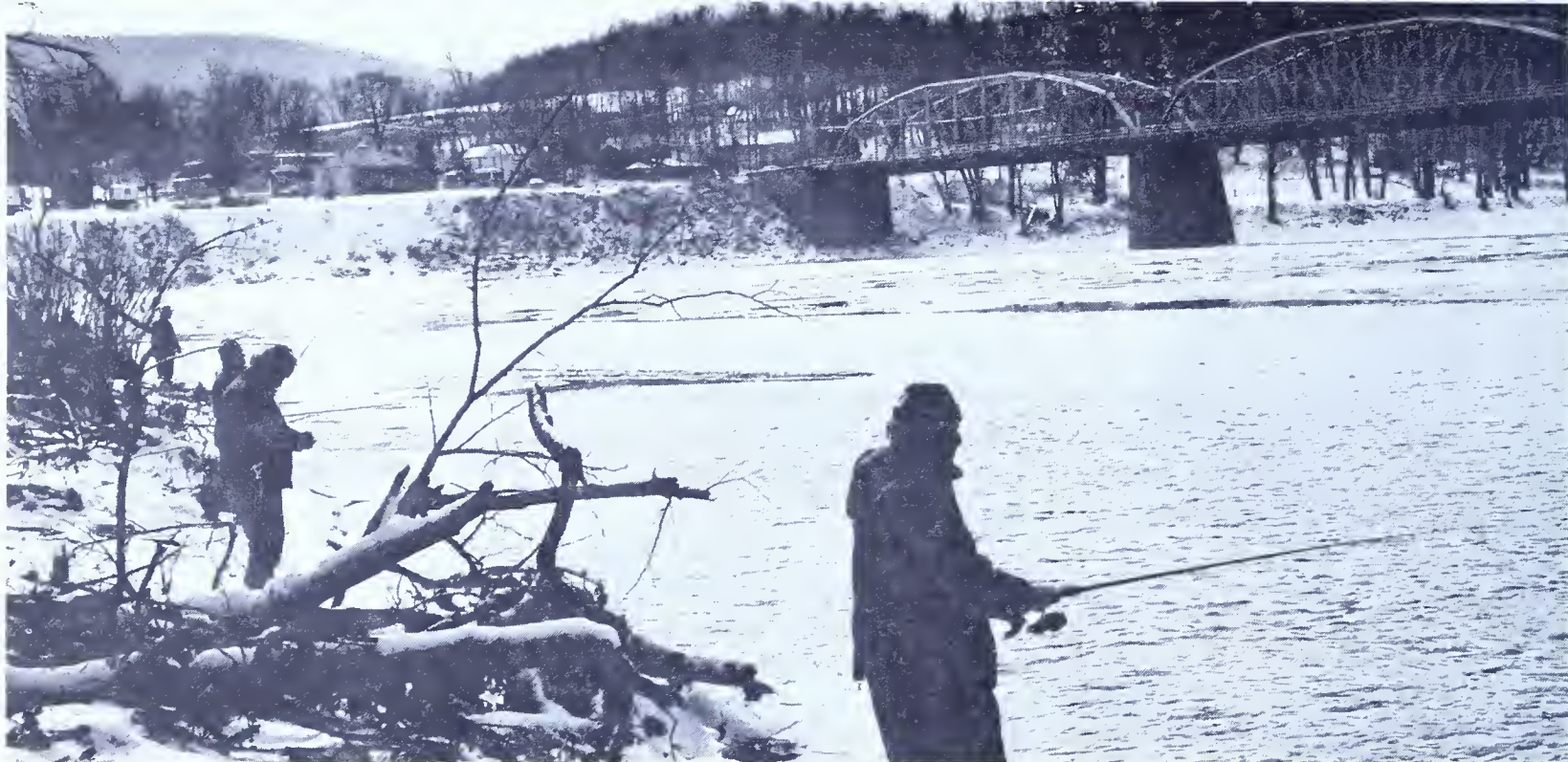
Back Cover: Winter gives up slowly reluctantly, up in the "North Country." That's just the way Staff Photographer Russell Gettig found Wykoff Run last year on a photo-gathering trip through the Cameron County hills.

MONTHLY COLUMNS

FISHING OUTLOOK	2	FLY TYING	26
LEAKY BOOTS	4	CO-OP NEWS	28
TAKING A CLOSER LOOK	6	ANGLER'S NOTEBOOK	29
STREAM NOTES	24	ASHORE & AFLOAT	30

James F. Yoder, Editor

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The mouth of Wyoming County's Tunkhannock Creek is a favorite spot for both muskies and walleyes.

fishing outlook

by george e. dolnack, jr.

The season's end on gamefish is fast approaching and anglers have only a few weeks left for a last chance at one of our biggest and meanest fish: the musky. Muskies can be found all across the state and there are some real big bruisers cruising around that could easily chomp your foot, shoe and all.

Larry Baker, District Waterways Patrolman for Juniata and Mifflin Counties says that the hottest musky spot in the state is the Juniata River and that anglers have a better chance of landing one from its depths than any other water in the state.

"The old '150 hour-per-fish' rule of thumb just doesn't stand up when you're fishing the Juniata," he said.

The average *big* musky has been running 40 to 44 inches and a monster caught by Bob Cook of Lewistown last fall measured over 45 inches and weighed 28 pounds. Baker remarked that it wouldn't surprise him to see a 50-inch musky pulled out of the Juniata any day.

The most popular lure used by 75%

of the musky fishermen on the river is the six-inch jointed Rebel. Florescent orange is preferred when the river is murky with the silver/black and gold/black seeing lots of action as the water clears.

Unlike the Susquehanna, Baker points out, jigs and spinners don't seem to do well on the Juniata. About 85% of the muskies are caught on plugs, 10% on live bait such as 6- to 8-inch suckers or fallfish and the remainder on spinners and spoons while fishing for smallmouth bass.

He also advises that surface plugs aren't too productive since the lure has to run at least a foot or so under the water to be effective.

Tactics vary and one angler does best by jiggling his lure as he retrieves it at medium speed. Making a figure eight with the plug at the boat's side is also effective and catches muskies. Still, other anglers use a spinner with a squirrel tail as a locator and after a fish follows the lure towards the boat, the fisherman switches to a plug in an effort to catch the fish.

Baker hedges on pinpointing the hotspots since anglers can chance onto a musky most anywhere on the river. Some of the more popular holes in Juniata County are the pool at the Fish Commission's Thompsettown Access Area, the confluence of the Juniata and Tuscarora Creek at Port Royal, the pool opposite the radio station at Mexico, and the area near the county line at Roaring Springs.

In Mifflin County, Baker suggests the river along the bypass and downstream in Lewistown, the pool along Route 103 in Ryde and the water upstream from the bridge in Newton-Hamilton. The fish, he said, lay in the eddies just out of the current.

Eastern Warren County Waterways Patrolman Paul Sowers said that the number one choice for muskies in his district is the Allegheny Reservoir (Kinzua Dam). The reservoir, he said, produces fifty or more muskies over 40 inches long each year and that a 51-inch, 46-pounder was taken through the ice early last year.

On the reservoir, if it's free of ice, Sowers says that trolling with hardware such as the Creek Chub Minnow, six-inch Rapala, spoon type lure and the Big "O" is productive.

The tailrace below the dam rewards anglers with nice sized fish too, and Sowers said that he knows of 25 over 40-inches-long that were taken last year. Best lures to use here are jigs, big minnow-type lures like those previously mentioned and large spoons spin-fished from shore.

Wilbur Williams, McKean County Waterways Patrolman, said that the lower arm of Kinzua has given up some enormous fish. Though boat fishermen do best on muskies, they are also taken from shore and through the ice. Ice fishing this time of year can be an "iffy" proposition and those venturing out on hardwater are advised to use caution.

Fourteen-year-old Vincent Fairel was drift-fishing a minnow for bass when that 46-inch musky took hold! The 23-pounder was taken from the pool at the Perkiomen's confluence with the Schuylkill River.

Representative of the muskies caught in the lower arm last year were a 49½-inch, 37½-pounder and a 45¾-inch, 28½-pounder.

Big, jointed, minnow-type lures do well in open water as do 6- to 8-inch suckers. The suckers, on a #2 hook tied to a wire leader and fished in 8 to 15 feet of water from a tip-up does the trick for ice fishermen. Besides muskies, they've pulled northern pike up to 41-inches-long through the ice.

Favorite spots in this area of the reservoir are Chappel Fork, Red Bridge, Elijah Run, Dew Drop and Kiasutha.

Bob Klaiber, who runs Bob's Trading Post near Red Bridge, gets to see most of the big fish caught on the lower arm. His bulletin board is plastered with photos of not only giant sized muskies, but with northern pike, walleyes, bass and trout as well. But that's another story.

Williams said that good musky fishing is also available in the Allegheny River and Oswayo Creek from the Potter County line up to New York. Potato Creek is also a musky haven with a 44-inch, 28-pound tackle buster being caught near the Farmer's Valley Refinery. Williams said that the fish have entered these streams from the reservoir.

Don Hyatt, Westmoreland County District Waterways Patrolman picks the Allegheny River between Locks #3 and #5 for musky. He said that most of the activity can be found at the mouth of Bull Creek near the Fish Commission's Tarentum Access Area and at the mouth of Chartiers Run just below Lock #4. Musky fishing has been fair to good at Schenley, at Lock #5, he said. To insure a future musky supply, fingerlings were planted between Locks #3 and #4 last year.

Greene County District Waterways Patrolman, Gary Deiger chooses the South Fork of Ten Mile Creek from Waynesburg downstream to Jefferson as the best musky water in his region.



This section of water has been heavily stocked for a number of years and produces at least a couple dozen of legal muskies annually. The largest one that was verified measured 44 inches.

Deiger says that the three choice spots on this run of water are the dam in Waynesburg, the "Goatfarm," and the "Homeville Stretch." Legal muskies have been caught along the entire length of the area with the average size running about 34 inches and weighing 8 to 10 pounds.

Dunkard Creek from Mt. Morris to Bobtown has also been stocked and fish in the 30- to 34-inch range have been reported caught. Deiger highly

recommends Dunkard Creek to the musky fishermen since it receives very little pressure.

Scattered catches from the Monongahela River have also been made and Deiger considers the Mon as the "water of the future."

Lures that have been catching muskies in Greene County are medium to large size minnow-type lures; Creek Chub and Pikie Minnows, and medium to large Mepps spinners. Deiger said that if he were going musky fishing, he'd use a 6- to 8-inch Rebel in silver or gold finish and fish it around noon (yes, noon!) and retrieve it as fast as he could.

continued on page 29.



HERE WE GO AGAIN!

Wonderful magazine — except for the overemphasis on boating! Count me as yet another who finds this feature “sickening.”

Enclosed is my renewal. You can do me a favor by *not* mailing me the three July boating specials. You editorialized in the October issue that boats and boating are an Angler magazine responsibility. So are snakes, frogs and turtles, but you don't feature this group as prominently as you do boating. I offer a suggestion. If boating is such a high priority item, why don't you start another magazine dedicated strictly to the boating fraternity — leave the Angler for the anglers — or don't you feel that the boating enthusiasts could support a magazine of their own?

Three cheers for Ed Wagner of Pittsburgh for telling it like it is.

CLIFF SAMICK
St. Marys

OK, Cliff, but I just hope you're standing on the dock someday when I come rowing in with a stringerful! Don't worry about the snakes, frogs and turtles . . . we're friends of theirs, too. How'd you like the snakes and turtles on the back cover of January's issue? We'll get to the frogs soon, too. Ed.

SHAPE UP, MEN!

I am concerned with the way some fishermen act. They call themselves sportsmen, always taking home their limit every time they go fishing. Didn't they ever hear of the widely used phrase, “Limit your kill, don't kill your limit”?

I can remember on opening day of trout season, when a group of men who were camped out on the stream waiting for 8:00 a.m. to roll around, were tossing beer cans and plastic bags left and right. When they finally left, they left a really big mess behind. I don't know who they were but I had a pretty good idea, “ignorant!”

I know this is the exception and not the rule, but there are an awful lot of men and women who don't care what happens to our streams and lakes. If you can carry a six-pack in, then you can carry it out when it is much lighter. All you have to do is smash the cans into very small objects and slip them into your vest or tackle box.

I am only 15 years old and there isn't much that I can do, but whenever I see a bottle or piece of paper, I pick it up.

To you guys who leave fishing line lying on the bank waiting to be wrapped around a small birds leg, I feel sorry for you. Your common sense should tell you that you are not only killing wildlife, but also you might be killing a man. Someone could get his feet entangled in the line that has washed into the water, and then not being able to get free, eventually drown. Now there are a lot of times when you find a snag and your line breaks, this you can't help, but when it is possible pick up that line that you cut, it may not only save your life, but your friends', or an animal's too. I hope that some of you have read what I have said. Let's make this a more beautiful and enjoyable world for everyone and everything.

JEFF NISSLE
Phoenixville

P.S. Keep up the good work with the Angler. This is my second year to have a subscription, and I hope there are many more years to come. I especially enjoy the section, “Notes From the Streams,” keep it coming.

There isn't much you can do? Jeff, good buddy, you're decades ahead of the careless slobs — most of whom are many years your senior, but only in terms of years here on Earth, not necessarily in “smarts” — who have so desecrated our streamsides. If you're picking up the trash left behind by others you're obviously not leaving any of your own — which is a whale of a lot more than we can say about them. Keep up the good work! You're setting an excellent example for young and old alike — who knows, someone might take the hint after seeing you in action and do likewise. Ed.

HOW COME?

While fishing Lake Nockamixon this summer, I have noticed muskies cruising the surface of the lake *with their mouths open*. This can give a guy a funny feeling on a foggy morning. (*Editor's Note: You saw “Jaws,” too, right?*)

I would appreciate knowing the reason for this odd behavior. I have been told by other anglers that it occurs because the musky gets a new set of teeth each year. This supposedly makes his mouth tender and so he prefers to skim bugs off the surface. I find this hard to believe . . . I thought it might be due to unusually low oxygen levels in the lake.

May I have your thoughts on this matter?

CHARLES F. YOUNG
Center Valley

Dear Mr. Young:

Your letter regarding the behavior of muskellunge in Nockamixon Lake has been referred to me for reply.

Frankly, I am not at all certain as to why the muskellunge were behaving as they were. There is no basis for the idea that members of the pike family become “tender-mouthed” and resort to feeding on floating insects. Oxygen levels during the summer months were adequate from the surface to a depth of seven feet, so oxygen levels in themselves would not cause this behavior.

We have, however, found muskellunge during our surveys of this lake that were in distress. Most of these had been injured either by being hooked deeply or by being mishandled while being unhooked. The reason for the distress of others was not as obvious but was characterized by a very poor condition factor (a relationship between length and body weight). At any rate, fish that are suffering, especially as the result of damage in the gill area (as often happens when improper release methods are used by anglers), will often behave as you have described since their ability to obtain oxygen is impaired.

We will, in the future, be on the lookout for fish behaving as you have described and attempt to either substantiate what I think may be the cause or to otherwise determine the reason for the behavior. If we are successful, I will keep you informed of the results. Thank you for your interest.

Sincerely
Richard W. Marshall
Area Fisheries Manager

GOOD NEWS—

I'm a young Angler subscriber. I've been very happy with the articles and the fantastic notes. I encourage other fishing and boating fans to enroll in this exciting magazine. Thank you for your great service.

MARK SMITH
West Mifflin

MARCH IS SUCKER TIME! ➡

Staff Photographer Russell Gettig captured one of those precious moments in the life of every youngster, opposite page. That sucker might not be big enough to enter the record books, but you'll have a difficult time convincing our young angler it wasn't the prettiest fish that ever swam!



Taking A Closer Look

by Tom Fegely

PENNSYLVANIA'S UGLY DUCKLINGS

Although most people meet their first toads in a garden or flower bed, these “ugly ducklings” of the amphibian world are entirely dependent upon clean water for their survival. Having spent the winter buried beneath the earth in a rock crevice or alongside the foundation of a house, the spring thaw urges them to dig their ways out and head for the nearest breeding pools.

Early in the season only a few males can be heard calling. But by late April many more have made their ways to water and an almost constant melodic “trilling” is heard across our Pennsylvania wetlands.

The male American toad, distinguished by a black throat, lures the silent females to the breeding pools with his tremulous voice. Throughout both the day and nighttime hours he joins his fellow chorusters in song until toads of both sexes are present in large numbers. As the amphibians paddle about in search of suitable mates, miniature battles ensue. Unlike the secretive spring peepers which may be breeding nearby, the toads do not seem to be bothered by human intrusion.

Last spring I took a rainy day walk to a small isolated pool behind my Lehigh County home. Here I discovered about a dozen of the warty amphibians splashing about in the frigid water. Occasionally one would bump into another and a ten-second battle would ensue. One particularly large male occupied a floating branch and refused to let another smaller toad share it with him. Whenever the younger toad would attempt to get

aboard, the “King of the Mountain” would promptly butt him off.

It was late April and yet only one pair seemed to be concentrating on the real reason for all of the activity: mating. The male clung to the back of the much larger female so tenaciously that my picking them up seemed to have no effect on the egg-laying process. The eggs continued to slowly flow from the female’s body in two long gelatinous strings. The male’s chore was to simultaneously release sperm into the water so that the eggs would be fertilized externally. When I placed the pair back into the water they paddled only a few inches away and continued the process.

When I visited the pool a week later I found many stringy coils of eggs

vegetation and debris. A few days later the newly hatched young grow into typical “polliwogs” with round bodies and transparent tails.

Since a single female lays from 4,000 to 8,000 eggs, it is easy to see how a woodland pool may contain hundreds of thousands of toad tadpoles. A variety of fish, birds, and other amphibians take advantage of these populous waters and prey on the larval toads.

Seven or eight weeks later the survivors have grown legs and lungs, lost their tails, and venture onto land. Shoreline anglers find them hopping everywhere. Oldtimers often say that it has been “raining toads”, especially after a spring shower when the tiny youngsters get the urge to travel and



These are tadpoles of the American Toad, above. Note the external gills.

strewn atop the leafy bottom debris. Here and there a few tiny black tadpoles moved about with rapid movements of their pointed tails. Although a few toads were still evident, most of them had already completed their breeding cycle and moved on to spend the summer in search of worms and insects.

Toad eggs typically hatch in three to twelve days, depending on the water temperature. Their stringy appearance readily identifies them from frog eggs which are laid in floating clumps or in clusters on submerged vegetation.

When they emerge from the eggs, the tiny jet-black tadpoles possess neither eyes nor mouthparts. Shortly thereafter they develop temporary external gills and a V-shaped adhesive device on the throat for clinging to

seem to be everywhere.

Although the superstition that toads give warts to people is entirely false, the belief was probably started because toads do exude a poison through their skin glands. A dog, cat, or raccoon that grabs a toad in its mouth soon spits it out and learns to let these rough-skinned amphibians alone. Strangely enough, skunks, hawks, and owls occasionally feed on toads and the docile hognose snake preys almost exclusively on them.

Like a frog, a toad’s tongue is attached to the front of the mouth and it can whip it out with amazing speed to catch a fast-moving insect. This characteristic makes the American toad one of the most valuable wild creatures in the garden. In a single summer, a pair of dooryard toads can



Pennsylvania's most common toad is the American Toad, left; rarest is the Eastern Spadefoot Toad, right.

eliminate thousands of grubs, worms, and flying insects that would otherwise destroy our vegetables.

The toad with which most Pennsylvanians are familiar is the common AMERICAN TOAD (*Bufo terrestris terrestris*). It is this species that we hear trilling on warm spring evenings.

The little-known FOWLER'S TOAD (*Bufo woodhousei fowleri*) does not get as big as its famous cousin nor does it have as pleasant a song. Instead, this amphibian's voice has been likened to that of a bleating sheep. Its breeding time usually commences about a month later than that of the American toad. It has been

recorded from 32 Keystone counties. The American toad is found statewide.

The FOWLER'S TOAD can be separated from the AMERICAN TOAD by the presence of more than two warts in each dorsal spot and the absence of large warts upon the upper surface of the hind legs. The AMERICAN TOAD contains only one or two warts in each dorsal mark.

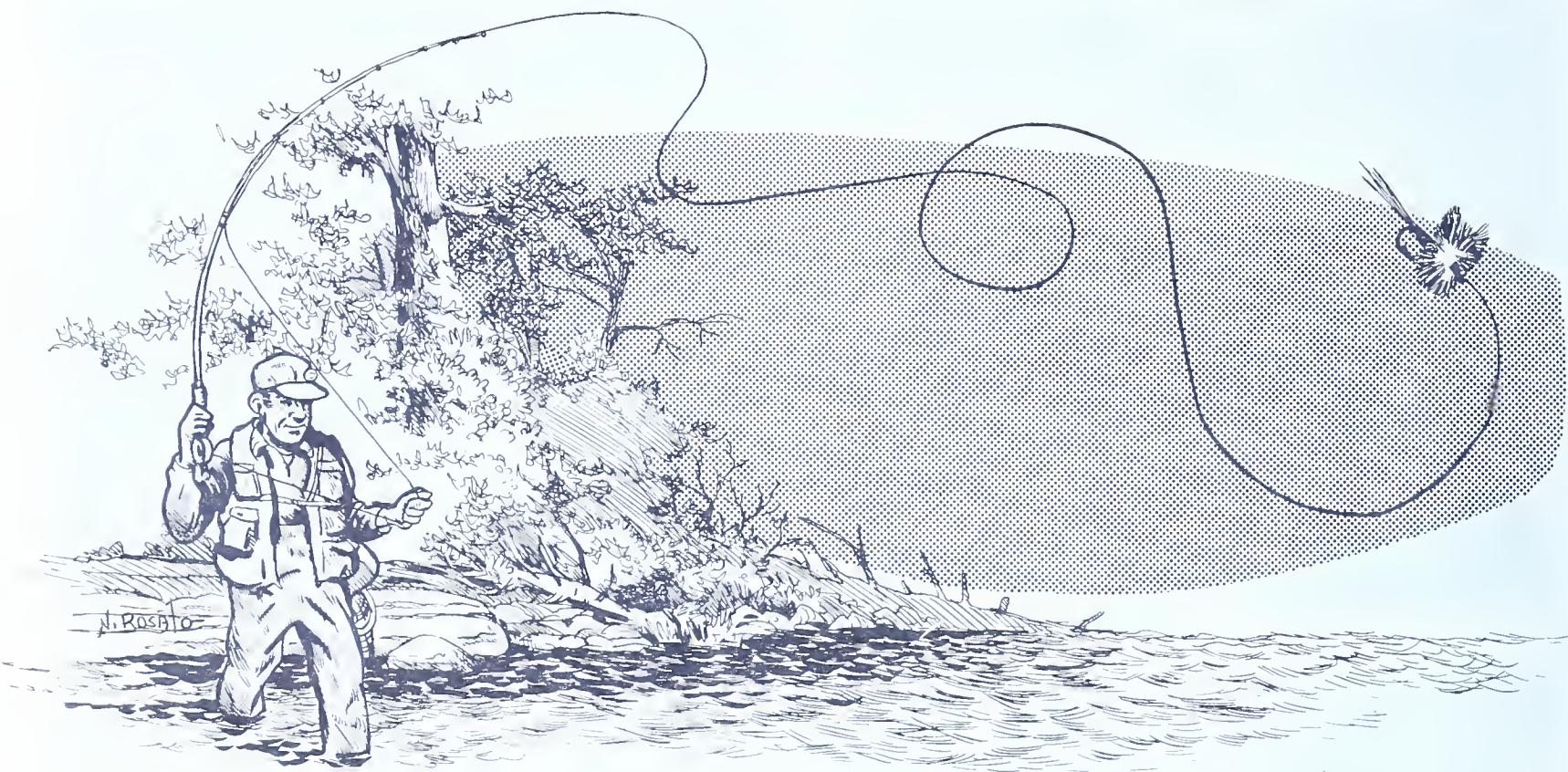
The rarest of the three toads is the EASTERN SPADEFOOT TOAD (*Scaphiopus holbrookii holbrookii*). Its maximum length is only about 2-7/8 inches and it has been recorded only in Cumberland, Delaware, Franklin, Monroe, Montgomery, and Northum-

berland counties.

The SPADEFOOT is a burrowing species and is seldom seen by any Pennsylvania outdoorsmen. It possesses enlarged digging "spades" on each hind foot with which it quickly and efficiently backs its way into loose soil. Outside of the breeding season it spends very little time above ground. The exception to this is after heavy rains when it emerges to search for worms and insects. Naturalists have discovered that the spadefoot has the ability to store water in its body and is therefore able to withstand long periods of drought in its underground hideaway.

Two views of the little-known Fowler's Toad, below, show dark spots with two or more warts in each one.





Tying Your Own Leaders

by Michael Sajna, Jr.

One of the most important, yet most overlooked pieces of equipment by the beginning fly fisherman is the leader.

Generally speaking, when a person first decides that they would like to start fly fishing and the time arrives for choosing a leader they will do one of two things. Either they will run right out and pick up a small service spool of a given pound test monofilament that they feel will be strong enough to "hold" the fish they are after and use that; or, they will do a little reading, find out that they should be using a tapered leader and then purchase a few packets of a commercially drawn tapered leader.

Of these two people, the person using the commercially drawn leader is decidedly ahead of the person using the plain, level length of monofilament for a leader. But how good, really, are these commercially prepared tapered leaders? While they will progressively transmit the energy of the cast all the way down to the fly — the main failing

of a level leader — and thus place the fly a distance away from the line and disassociate the two. The commercially drawn tapered leaders that one finds in most tackle stores tend to be too short, usually somewhere in the 7½-foot neighborhood. Too, the monofilament used in them is too stiff all the way through, so that they do not allow for that certain critical amount of slack needed for a good drag-free float, and just plain too inconvenient when it comes time for making adjustments to a change in fly size.

So where does that leave the beginner? With these first two options taken away, we now come to the third and, so far, the best leader available today: the leader tied by the fisherman himself.

At first the idea and terminology involved will all be terribly confusing to the novice: "Butts," "Tapers," "Tippets," and "Diameters." They will all seem to be thrown together in an impenetrable jumble. But after a while, and some more experience and read-

ing, it will all become second nature to the angler. And, he will not even think about going back to either of the other two types of leaders. For the varieties that will become available to him and the chances of coming up with the exact leader needed in a given situation will have become so infinitely greater than any he will ever have using the commercially drawn leaders on the market that he will come to look upon the other as completely useless to him.

So, with these things in mind we can now begin to untangle some of the mysteries of leader-making, terminology, and take a look at just how to design a tapered leader.

To begin with the three sections of a tapered leader are the *butt*, the first and heaviest section to which the fly line is attached, the *taper*, the middle section which decreases in size, and the *tippet*, the end or lightest section to which the fly is attached.

The butt section of a leader is the longest and, as was mentioned, the

heaviest part of the leader and should be approximately 60% to 65% of the entire finished length of the leader, and no more than .010 different in diameter than the end of the line. The majority of American double taper lines falling in the .030 diameter area the butt section of the leader should be .020 or slightly larger. Weight forward and plastic coated lines are a bit larger in end diameter and require a butt section of between .022 and .025 if the leader is to function properly.

Great care should be taken in choosing the butt section of the leader. The most common error in leader making is a butt too short or too light, either of which will prevent a leader from turning over and laying the fly out the way it should. So, pay especially close attention when the time comes for cutting the butt and make certain that it falls within the limits of the diameter of the line you are using and is at least 60% of the finished length of the leader. For the person looking for a *perfect* leader, a micrometer can prove very useful here. But, in the case of the beginner or casual fisherman, one is not really needed if they follow the chart included herein.

After the butt, comes the tapered section of the leader. This section gradually decreases in size so as to form a smooth union between the heavy butt and light tippet sections. It should be approximately 20% of the leader. And with today's monofilament, line can jump as much as .002 between sizes.

With the tapered section securely tied and joined to the butt, we come now to the tippet — the last and real business end of the leader. The tippet should consist of the remaining 20% of the leader, but is open to variances either way depending on water conditions, fly size and fish. A good rule to follow here is the larger the fly — in relation to the diameter of the tippet — the shorter the tippet.

The way a fly lands on the water has a great deal to do with success in fly fishing. A fly that gently drops to the surface of the water will almost always take more fish than one slamming down and covering a pool with rings. It is a good idea for a beginner to take some time out along a quiet stretch of stream and study his line and leader. Smooth the leader first with a piece of rubber. A small patch of an old inner

tube is excellent and your leader should now fall straight. Watch your cast, both forward and backward, to see how the leader rolls out. If it unrolls and lays the fly out straight — a distance away from the line, you're in business. But if it doesn't but tangles and drops in a heap near the line, and you're casting correctly, begin again, checking first the butt — to make sure it is long and heavy enough — then the tippet to see whether it might be too long or light for the size fly you're using.

To bring all this together and illustrate what has been said, an example of a nice 9-foot, 5X leader for the majority of double taper lines can be tied as follows: a butt of 28 inches of .021, followed by a 14-inch section of .019, then 12 inches of .017, 10 inches of .015, six inches each of .013, .011, .009, and .007, with a tippet of 20 inches of .006 (an Orvis formula).

Not all leader material is alike . . . some being hard, some soft, and both types are used in a good leader. Stiff material should be used for the butt of the leader and about half the following sections. Soft material should be used from about the middle of the tapered sections through the tippet. Hard material in the butt and midsection of the leader makes it "turn over," while the soft sections allow the fly to float more naturally with less chance of drag.

As with anything else in fishing, these figures and formulas are by no means absolute and can vary considerably once an angler gains more experience and knows more about what he wants or needs in the way of a leader: a stiffer type monofilament for the butt, longer tapered sections, or a sinking tippet, for wet fly and nymph fishing, for instance. Until then, the above formulas and examples should serve well.

The following tippet formula,

recommended by Leonard, is an excellent one:

SIZE	DIAMETER	APPROXIMATE TEST	FLY SIZE
7X	.004	1 lb.	18, 20, 22 & 24
6X	.005	2 lb.	16, 18, 20 & 22
5X	.006	3 lb.	14, 16 & 18
4X	.007	4 lb.	12, 14 & 16
3X	.008	5 lb.	10, 12 & 14

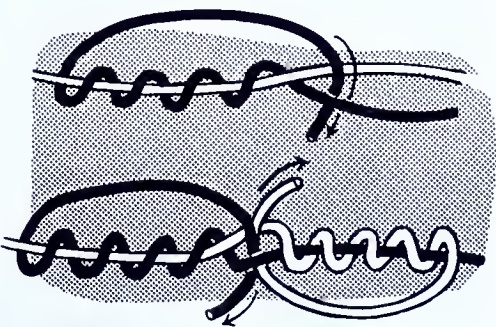
A few last notes of importance. The best knot for joining leader sections together is the blood knot. The best knot for joining line to leader is the nail knot — coated with Pliobond for extra smoothness and strength.

A 7½-foot leader is considered *short*; anything over 9-feet, *long*. The size and length used should depend on water conditions and size and type fish sought. Most beginners ignore this and use a tippet far heavier than needed. A 5X or 6X is strong enough for the average fish and an occasional larger one — if handled properly.

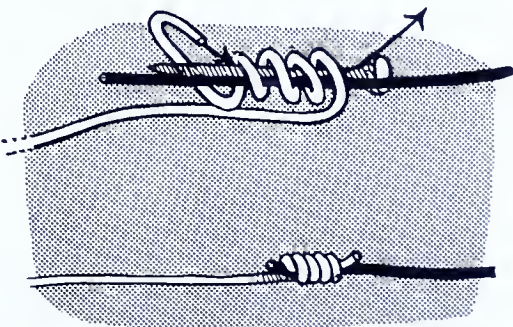
Also, it is extremely difficult, if not impossible, to tie a leader using "pound test" ratings. Unlike with fly lines, manufacturers have done nothing to standardize the diameters, or breaking strength, of leader material. One manufacturer's "6X" may have a completely different diameter and "pound test" rating than another's — yet both will still be sold as "6X." So, if you are not using a micrometer, and if it is at all possible, stick to the same manufacturer's material all the way through the leader or you may find yourself tying a smaller diameter behind a larger and throwing the balance of the entire leader off.

Finally, there are now available from several tackle manufacturers leader-tying kits, with the proper material and specifications for various lengths and types of leaders. For both the complete novice, or more experienced fly fisherman, investing in one of these kits may be the surest road to success in tying your own leaders.

BLOOD KNOT



NAIL KNOT





Note the DIFFERENCES between the Channel Catfish, left, and young Larry Knorr's White Catfish, above. In most cases, the tail of the Channel Cat is more deeply forked, the lobes more sharply pointed than the White. Too, note the sharp line of demarcation along the fish's side separating the darker upper half of the White Catfish's side from its lighter, almost white, underside - this line is not found on the Channel Cat. Below: That's William "Catfish" Quick with the heaviest Flathead Catfish ever recorded from Pennsylvania's waters. Although an inch shorter, it outweighed Ralph Painter's record 43½-inch by a pound and a half. Length alone determines Pennsylvania records with weight only a factor in case of a tie. The Flathead is not difficult to identify - there's just nothing else like it around!



Don't be "Bullheaded"...

Know Your Catfish

All bullheads are catfish...

but not all catfish are bullheads!

*by John Selcher
Aquatic Biologist*



No trick photography here! Ralph Painter's record-breaking Flathead Catfish measured 43½ inches, weighed 35 pounds. Ralph caught it from the Allegheny River, using a sucker for bait, breaking the previous record of 42½ inches held by William Quick.

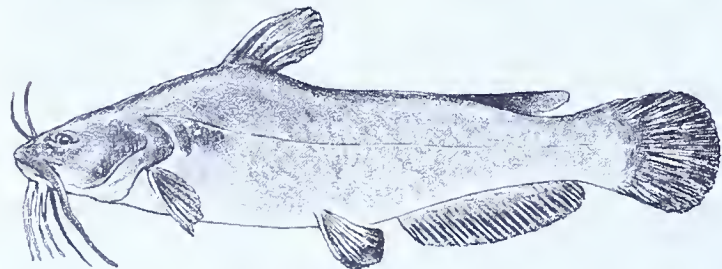
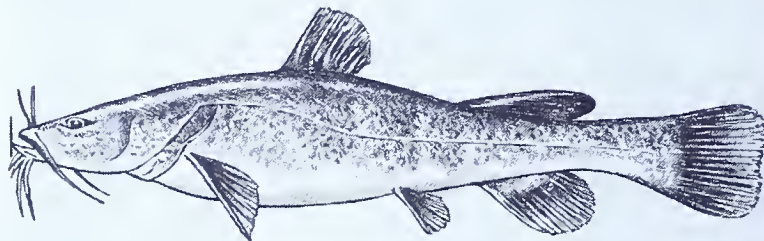
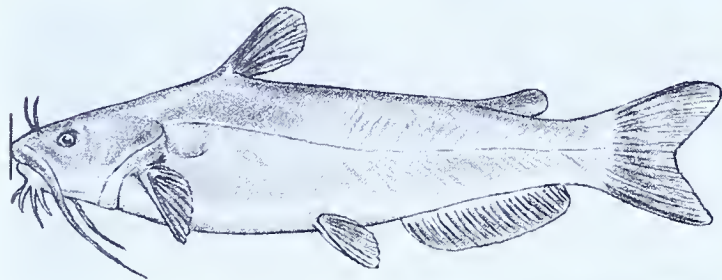
The primary purpose of this article is to introduce you to a very special whiskered quintet. I am not referring to a rock band, basketball team, or a group of unshaven hunters after the third day at a deer camp, but to the five largest members of the catfish family in Pennsylvania: a group which would seem to need no special introduction but our experience proves otherwise.

Although most fishermen have caught one or more species of catfish, few are aware that habitat preferences, growth potential, and physical characteristics of each species are unique. The diversity of "life styles" of the BROWN BULLHEAD, YELLOW BULLHEAD, WHITE CATFISH, CHANNEL CATFISH, and FLATHEAD CATFISH practically guarantees that at least one species will be adapted to every warmwater lake and stream in Pennsylvania. And, although catfishes cannot claim the beauty of the trout, or the flashy fighting ability of the bass, fishing in Pennsylvania is certainly spiced by their presence and the species has a group of devotees who seldom fish for anything else!

Most anglers know a *catfish* when they see one; but, few know *what kind* of catfish they have. Positive identification of the five sport catfishes found in Pennsylvania waters might at first seem to be a difficult task because the catfishes are grossly similar — *all have whiskers, spines, and no scales!* Many fishermen find it nearly impossible to distinguish one from another, but the secret to correctly identifying the catfishes is close attention to detail and concentration on *differences . . . not similarities.*

The *Pennsylvania Angler* editor and staff have, for quite some time, lamented their fate concerning the rampant misidentification of catfishes submitted by anglers for consideration as Citation-sized "*bullheads*"! All too often the accompanying photographs

PENNSYLVANIA CATFISH FACTS



SPECIES	MOUTH	COLORATION
CHANNEL CATFISH	Upper jaw longer than lower jaw	For fish less than 14.0 inches, bluish or olivaceous; silvery on top, silvery-white below with variable number of dark spots on body. Larger fish tend to be dark steel-blue above, white below. May or may not have dark spots on bodies.
WHITE CATFISH	Upper jaw longer than lower jaw	Bluish above, silvery below with bicolor appearance because of sharp demarcation line between dark color of lower sides and light color of belly.
FLATHEAD CATFISH	Upper jaw always shorter than lower jaw.	Yellow to dark brown above. Sides lighter and mottled with darker colors. Yellow to yellow-white below. Top and bottom of caudal fin lighter than rest of fin.
BROWN BULLHEAD	Upper and lower jaws nearly same length.	Chin barbels (whiskers) dark. Various shades of brown above. Sides lighter and often mottled with darker browns. Yellow to white below.
YELLOW BULLHEAD	Upper and lower jaws nearly same length.	Whitish or yellowish chin barbels. Yellow to brown-black above. Sides are more yellowish; yellow to white below.

are not clear enough to prove otherwise — they're either blurred, out-of-focus, too dark, or taken from a poor angle.

(Editor's Note: To aid our staff in identifying your catfish, photograph it from its side — like most of the fish on these pages. Most important is that the tail be seen clearly from the side. Photos which show only the back, or top of the fish are useless. Unless accompanying photographs positively identify the catch, the Citation Application cannot be honored.)

According to Trautman's "The

Fishes of Ohio," published by the Ohio State University Press (which serves Pennsylvanians equally well), the maximum size attained by the BROWN BULLHEAD, the largest of the true bullheads, in Ohio is 18.7 inches. Fish Commission biologists have captured tens of thousands of Pennsylvania bullheads with the largest one measuring less than 18.0 inches! With these facts in mind, Citation Applications for BROWN BULLHEADS in excess of 18.0 inches are treated with more than passing disbelief. *(In short, there ain't no such critter! Ed.)*

There are many keys available to aid in the identification of fishes; but, these are useless to most anglers because such keys assume the user possesses a high degree of familiarity with fish anatomy and technical terminology. I have prepared a simple key which requires only the ability to differentiate between a caudal fin and a swim fin! Seriously, use of the key depends only on your knowledge of the shape of the tail, the length of the upper jaw — compared to the lower, and the color of the fish.

To use this key, first determine

HEAD	ANAL FIN RAY COUNT	CAUDAL OR TAIL FIN	APPROXIMATE MAX. SIZE Inches Pounds		PREFERRED HABITAT	PENNSYLVANIA DISTRIBUTION
Somewhat pointed, more streamlined than bullheads.	24-30	Young individuals with deeply forked tail with pointed lobes. Older fish may have only moderately forked tail with rounded lobes.	50	60	Swiftly flowing waters (below dams) and waters with low or base gradients with bottoms of sand, gravel, or boulders. Seldom found around aquatic vegetation. Abundant in only a few lakes in Pennsylvania.	Statewide.
Wider than that of Channel Catfish of same length.	18-24	Moderately forked tail with rounded lobes.	24	6	Sluggish current, more tolerant of silted bottom than channel catfish. Occupies habitat between channel cats and bullheads.	Most abundant in Delaware River Drainage. Found occasionally statewide.
Very wide and notably flattened between eyes.	14-17	Nearly straight or slightly emarginate tail.	60	100	Sluggish deep pools of low gradient portions of large streams. Found over hard bottoms in very turbid water.	Ohio River Drainage.
Typically "catfish."	22-23	Tail slightly emarginate.	18	4	Impoundments or portions of streams where water is rel- atively clear with moderate amounts of aquatic vegetation over bottom of sand, gravel, or muck. Found in deeper water than yellow bullhead; requires less aquatic vegetation to thrive.	Statewide.
Typically "catfish."	25-26	Tail is slightly rounded.	18	3.5	Shallow portions of lakes and streams with clear water and abundant aquatic vegetation over bottoms of gravel, sand, peat, or muck.	Statewide.

whether Statement #1, below, is correct. If it is, skip Statement #2 and proceed to Statements #3 & #4. Then, you can determine whether your fish is a CHANNEL CATFISH or a WHITE CATFISH by matching its characteristics to one of these two statements.

If Statement #2 is correct, go to Statements #5, #6, & #7, and determine which statement most closely describes your fish.

1. Lower jaw is shorter than upper jaw. Tail is moderately to deeply forked. Color is blue to gray on top. If so, go to #3 & #4.

2. Lower jaw is longer than, or the same length as, the upper jaw. Tail is not noticeably forked. Color is yellow to brown on top. If so, go to #4, #5, & #6.

3. Smaller individuals have dark spots on their sides; there is no bicolor appearance: CHANNEL CATFISH.

4. No dark spots on sides; sharp contrast between darker color on top and sides, and lighter color below, giving a bicolor appearance: WHITE CATFISH.

5. Lower jaw considerably longer than upper jaw; head is wide and

notably flattened between eyes: FLATHEAD CATFISH.

6. Chin barbels (whiskers) are dark, at least at their base; tail is square or shallowly notched; jaws are about the same length: BROWN BULLHEAD.

7. Chin barbels are whitish or yellowish; tail is slightly rounded; jaws are about the same length: YELLOW BULLHEAD.

The accompanying table, "Pennsylvania Catfish Facts," gives more complete descriptions of the physical characteristics, preferred habitat, and distribution of each of the catfishes.

What is a
Pennsylvania Angler "FISHING CITATION"?

Summed up briefly, it's the Pennsylvania Fish Commission's way of recognizing skilled (or lucky!) anglers for trophy catches. Those who qualify receive a handsome certificate and a colorful shoulder patch which they may wear with pride! Every "contest" has its rules and so does our Citation Program. Follow them closely and be certain to complete your application blank. You may use the sample on this page, if you wish; but, most all Fishing License Issuing Agents, your District Waterways Patrolman or his Deputies, have additional blanks.

RULES FOR ENTERING CITATION APPLICATIONS

- 1. Fish must be caught in Pennsylvania waters open to public fishing without charge, by legal methods and during seasons open for the taking of the species involved. Private Lakes, private ponds (including farm ponds) are not considered "open to public fishing . . ." and fish caught therefrom do not qualify.
- 2. Fish must be measured, weighed and recorded by a Fishing License Issuing Agent or tackle store within the state — by the owner, manager, or authorized agent of the respective establishment; or, by any Waterways Patrolman or Deputy Waterways Patrolman.
- 3. Photographs are required as proof of catch. Nothing in these rules should be construed as placing responsibility for the supplying of photographs or the mailing of Citation Applications upon any of the persons mentioned above.
- 4. Nonresidents, as well as residents, are eligible for Citations provided fish are caught under the conditions outlined above.
- 5. Only Fishing Citation Applications received within 30 days from the date of catch will be honored.

LISTED BELOW ARE THE FISHING CITATION MINIMUM QUALIFYING SIZES:

SPECIES OF FISH	MINIMUM LENGTH IN INCHES	
	SENIOR (16 years and over)	JUNIOR (under 16 years)
Bass, Largemouth	23"	18"
Bass, Smallmouth	20"	18"
Bluegill	10"	9"
Bowfin	24"	20"
Bullhead, Brown	15"	14"
Carp	33"	28"
Catfish, Channel	28"	20"
Catfish, Flathead	36"	30"
Chain Pickerel	25"	23"
Crappie (Black or White)	13"	12"
Eel	40"	30"
Fallfish	18"	14"
Muskellunge (Incl. Tiger)	45"	30"
Pike, Amur River	36"	25"
Pike Northern	36"	25"
Rock Bass	11"	10"
Salmon, Chinook	30"	28"
Salmon, Coho	28"	26"
Shad, American	25"	20"
Trout, Brook	17"	14"
Trout, Brown	24"	18"
Trout, Lake	30"	24"
Trout, Rainbow (incl. Palomino)	24"	18"
Trout, Steelhead	27"	25"
Walleye	30"	22"
Yellow Perch	14"	12"

IMPORTANT: Check the "Record Fish" table on the next page. If you think your catch is a new record, it must be measured and weighed by an employe of the Pennsylvania Fish Commission.

APPLICATION FOR
PENNSYLVANIA ANGLER FISHING CITATION

Editor, PENNSYLVANIA ANGLER
Pennsylvania Fish Commission
Box 1673
Harrisburg, Pa. 17120

Date _____

Please consider this application for the PENNSYLVANIA ANGLER magazine's FISHING CITATION on the basis of the information listed below.

Name (Please Print) _____ Age _____

Street _____

City _____ State _____ Zip _____

Species _____ Length _____ Weight _____

Tackle Used _____ Bait or Lure _____

Name of Lake or Stream _____

County _____

Date Caught _____ Catch Witnessed by _____

Measured and Weighed by _____

At _____

Signature of Applicant _____



LISTED BELOW ARE THE TOTAL CITATIONS ISSUED IN 1975 BY SPECIES:

SPECIES OF FISH	TOTAL CITATIONS ISSUED IN 1975	
	SENIOR (16 years and over)	JUNIOR (under 16 years)
Bass, Largemouth	18	28
Bass, Smallmouth	29	13
Bluegill	6	24
Bowfin	0	4
Bullhead, Brown	5	3
Carp	6	15
Catfish, Channel	8	30
Catfish, Flathead	2	0
Chain Pickerel	13	3
Crappie	48	26
Eel	0	1
Fallfish	0	6
Muskellunge	42*	11
Northern Pike	19	16
Rock Bass	2	15
Salmon, Chinook	14	3
Salmon, Coho	13	6
Shad, American	10	3
Trout, Brook	19	15
Trout, Brown	34	23
Trout, Lake	1	0
Trout, Rainbow	10	18
Trout, Steelhead	6	0
Walleye	17	9
Yellow Perch	10	21
Total	332	293

*In addition to the 42 Citation size muskies (45" or more) caught during 1975, an identical number (42) measuring between 40" & 45" were caught which entitled the lucky anglers to full membership in the "Husky Musky Club." Another 47 legal muskies — over 30" but under 40" — also brought "Honorable Mention" certificates to those anglers making the catches!

PENNSYLVANIA'S RECORD FISH

Notice how some records have stood for decades?

Notice, too, that 1975 brought four new records!

SPECIES	NAME	LENGTH	WEIGHT	WHERE CAUGHT	YEAR
Bass, Largemouth	Stanley Pastula, Shenandoah, Pa.	29 in.	8 lb. 8 oz.	Stillwater Lake, Monroe County	1936
Bass, Smallmouth	Ed Meadows, Harrisburg, Pa.	24-1/2 in.	6 lb. 2 oz.	Conodoguinet Creek, Cumberland County	1937
Bluegill	Charles Drexler, McKees Rocks, Pa.	13 in.	1 lb. 8 oz.	Pymatuning Lake, Crawford County	1974
Bullhead, Brown	Carl J. Canfield, Montrose, Pa.	18 in.	unknown	Forest Lake, Susquehanna County	1975
Carp	George Brown, Saltillo, Pa.	44 in.	52 lbs.	Juniata River, Huntingdon County	1962
Catfish, Channel	Jim Rogers, Oil City, Pa.	39 in.	35 lbs.	Allegheny River, Venango County	1970
Catfish, Flathead	Ralph J. Painter, Natrona Heights, Pa.	43-1/2 in.	35 lbs.	Allegheny River, Armstrong County	1975
Chain Pickerel	Frank Streznetcky, Scranton, Pa.	31-1/2 in.	8 lbs.	Shohola Falls, Pike County	1937
Crappie	Stephen C. Sauve, Hyattsville, Md.	18-3/4 in.	3 lb. 4 oz.	Pinchot State Park Lake, York County	1971
Eel	Mrs. George Buchannan (No address given)	46 in.	8 lb. 8 oz.	Licking Creek, Juniata County	1954
Fallfish	Clarence Wheal, Hughesville, Pa.	19-1/2 in.	2 lb. 4 oz.	Loyalsock Creek, Lycoming County	1967
Muskellunge	Lewis Walker, Jr., Meadville, Pa.	59 in.	54 lbs. 3 oz.	Conneaut Lake, Crawford County	1924
Northern Pike	David Strait, Jr., Harrisonville, Pa.	45 in.	21 lb. 4 oz.	Lake Erie, Erie County	1971
Rock Bass	David L. Weber, Lake City, Pa.	17 in.	3 lb. 2 oz.	Lake Erie, Erie County	1971
Salmon, Chinook	William M. King, Girard, Pa.	39-1/4 in.	23 lbs.	Trout Run, Erie County	1975
Salmon, Coho	Doris Y. Kuehn, Wildwood, Pa.	31 in.	unknown	Lake Erie, Erie County	1972
Shad, American White	Vincent Graziano, Milford, Pa.	28-1/2 in.	7 lb. 4 oz.	Delaware River, Pike County	1965
Sheepshead	Gregory Parella, Brownsville, Pa.	26 in.	14 lbs.	Virgin Run Lake, Fayette County	1964
Sucker	George Kemper, Butler, Pa.	28 in.	9 lb. 12 oz.	French Creek, Venango County	1938
Trout, Brook	Joseph E. Marroquin, Duncannon, Pa.	23-3/8 in.	5 lb. 12 oz.	Shermans Creek, Perry County	1975
Trout, Brown	Frank Kociolek, Dupont, Pa.	33 in.	24 lbs.	Lake Wallenpaupack, Pike County	1967
Trout, Lake	Mrs. Arthur Cramer, Carbondale, Pa.	38 in.	24 lbs.	Crystal Lake, Lackawanna County	1952
Trout, Rainbow	Robert F. Teel, Hanover, Pa.	31 in.	10 lb. 4 oz.	Yellow Breeches, Cumberland County	1974
Trout, Steelhead	Roy Tenney, Erie, Pa.	33-1/3 in.	10-1/4 lbs.	Twelve Mile Creek, Erie County	1973
Walleye	Firman Shoff, Ebensburg, Pa.	36 in.	12 lbs.	Allegheny River, Forest County	1951
Yellow Perch	Herman Rausch, Butler, Pa.	18 in.	n/a	Oneida Dam, Butler County	1936

LARGEST FISH CAUGHT IN 1975

Who knows what Bicentennial 1976 holds for you?

You might be lucky enough to break a record, too!

SPECIES	NAME	LENGTH	WEIGHT	WHERE CAUGHT
Bass, Largemouth	Jeff W. Thompson, Harrisburg, Pa.	24-3/4 in.	8 lbs.	Susquehanna River, Dauphin County
Bass, Smallmouth	Neil A. Hood, Lake City, Pa.	22 in.	6 lb. 5 oz.	Kettle Creek, Clinton County
Bluegill	Matthew C. Gaspar, Pittsburgh, Pa.	11-1/8 in.	1 lb. 6 oz.	Lake Arthur, Butler County
Bowfin	David Gionfriddo, Dysart, Pa.	28 in.	7-1/2 lbs.	Glendale Lake, Cambria County
Bullhead, Brown	NEW STATE RECORD SET DURING 1975 — SEE TABLE ABOVE			
Carp	Byron Rodger, Wallingford, Pa.	38-1/2 in.	22 lbs.	Springton Reservoir, Delaware County
Catfish, Channel	Harry M. Santichen, Johnstown, Pa.	33-1/2 in.	17 lbs.	Somerset Lake, Somerset County
Catfish, Flathead	NEW STATE RECORD SET DURING 1975 — SEE TABLE ABOVE			
Chain Pickerel	Robert Carpenter, Harrisburg, Pa.	30-1/2 in.	7 lb. 2 oz.	Pinchot Lake, York County
Crappie	Jesse L. Dietrich, Fleetwood, Pa.	16-1/2 in.	2 lb. 3 oz.	Lake Ontelaunee, Berks County
Eel	Samuel Harshbarger, McVeytown, Pa.	40 in.	6 lbs.	Cowans Gap State Park Lake, Fulton County
Fallfish	John Hansell, Annville, Pa.	15-1/2 in.	1 lb. 6 oz.	Swatara Creek, Lebanon County
Muskellunge	Ralph B. McCool, Cochranton, Pa.	53-1/2 in.	33-1/2 lbs.	Sugar Lake, Crawford County
Northern Pike	Morris Pearlman, Glen Rock, Pa.	42 in.	21 lbs.	Lake Marburg, York County
Rock Bass	Bill Bowers, West Fairview, Pa.	11-1/4 in.	1 lb. 4 oz.	Susquehanna River, Cumberland County
Salmon, Chinook	NEW STATE RECORD SET DURING 1975 — SEE TABLE ABOVE			
Salmon, Coho	A. E. Rusbuldt, Girard, Pa.	30 in.	11 lbs.	Walnut Creek, Erie County
Shad, American White	William Hicks, Allentown, Pa.	27 in.	6 lb. 3 oz.	Lackawaxen Pool, Pike County
Sheepshead	(no entries during 1975)			
Trout, Brook	NEW STATE RECORD SET DURING 1975 — SEE TABLE ABOVE			
Trout, Brown	Lynn A. Grieb, Mill Hall, Pa.	32 in.	18 lb. 2-1/4 oz.	Big Fishing Creek, Clinton County
Trout, Lake	Arthur Tremelon, Plymouth, Pa.	33 in.	14-1/2 lbs.	Harveys Lake, Luzerne County
Trout, Rainbow	Steve Reichard, Red Lion, Pa.	29-1/2 in.	11 lb. 3 oz.	Muddy Creek, York County
Trout, Steelhead	Drew Larson, Girard, Pa.	32-1/4 in.	11-3/4 lbs.	Elk Creek, Erie County
Walleye	John L. Edling, Warren, Pa.	33-1/2 in.	12 lbs.	Allegheny River, Warren County
Yellow Perch	Charles R. Heffelfinger, Walnutport, Pa.	16 in.	3-1/2 lbs.	Bradys Lake, Pike County



Members of Camp Lamar, United States Youth Conservation Corps, above, take a breather after constructing one of the log deflectors built on Kettle Creek in Potter County. The Clearfield District YCC built that jack dam, below, on Lick Run, near S.B. Elliott State Park. Jack dam on opposite page is the work of Renovo District VCC with guidance supplied by DER's Forester, Mike Kusko, Jr.



“Adopt A Stream” from vision to reality

After witnessing more than a year of stream desecration performed in the guise of “stream improvement” following Hurricane Agnes, Executive Director Ralph W. Abele, in his Angler editorial of September, 1973, urged:

“I would like to see every sporting and environmentally oriented organization in Pennsylvania ‘adopt’ a section of channelized stream for improvement purposes.”

The pictures and text on the following pages would indicate his plea did not fall on deaf ears!



Written by Paul Swanson, Assistant Supervisor, Northcentral Region

Photographs by Russell Gettig, Staff Photographer

Many clubs and organizations made up of volunteer laborers of all age groups worked hard this past summer in Northcentral Pennsylvania to improve cover in our trout streams. District Waterways Patrolmen and our Fisheries Environmental Services Branch worked closely with each sponsoring organization on the planning and completion of their project. The types of devices installed consisted of channel blocks, deflectors and jack dams; materials, for the most part, were available at the sites.

This year's activity started in mid-May with a group of **Bucktail Council Boy Scouts** who were camping at S.B.Elliott State Park. This particular group installed a jack dam on **LICK RUN**, in Clearfield County. On this same day, a group of **Williamsport area Scouts** installed a channel block on **WHITE DEER HOLE CREEK**, in Lycoming County.

In late May, the **Sullivan County High School** installed several stone deflectors on **LOPEZ CREEK**. A pair of jack dams have also been constructed by this group in **MILL CREEK** near the village of Laporte.

During June and into July the **Elk County Federation of Sportsmen's Clubs** worked with a clean streams group who installed channel blocks and deflectors on **CROOKED CREEK**. In addition, they cleaned up tons of litter at **EAST BRANCH** of the **CLARION RIVER RESERVOIR** and the **LAUREL RUN RESERVOIR**.

We had the opportunity to work with the **Youth Conservation Corps (YCC)** again this year. The YCC group, out of **Camp Lamar** and about 30 strong, worked to completing eight large structures on **KETTLE CREEK** in Potter County on the "FISH-FOR-FUN" area. Executive Director Ralph W. Abele presented this group with

the Fish Commission's Conservation Award for their hard work. Hurricane Eloise ripped through this project less than a month following its completion. As a result, many of the newly installed devices failed to hold; however, those devices which had been installed the previous summer were well-seated and they held very well. It is hoped that the washed-out devices will be replaced this summer by contract with flood damage funds.

Another YCC group, working out of the Renovo Office of DER, worked on **TROUT RUN** in Clinton County installing a jack dam and a channel block.

A third YCC group, working out of the Emporium Office of DER, worked on **WYKOFF RUN**, in Cameron County, to rebuild a water jack dam that was originally installed in the 1930s.

The fourth YCC group, working

from the Clearfield Office of DER, worked to install a jack dam on LICK RUN near S.B. Elliott State Park.

The largest stream project of the year in the Northcentral Region was undertaken by the **Sinnemahoning Sportsmen's Association** on WYKOFF RUN. The Fish Commission's Engineering crew, led by Neil Walker, prepared the sites and completed one large channel block prior to the Sinnemahoning Club's workdays.

Fish Commissioner Leonard Green bussed representatives of **Explorer Post 800** from Carlisle and **Explorer Post 100** from Butler County to WYKOFF RUN and they completed two channel blocks. These devices held very well during Hurricane Eloise. In fact, I believe the WYKOFF RUN ROAD would have been damaged at this location *if these devices had not been completed!*

The **Sinnemahoning Club** then had a workday on which they attempted to complete a channel block/deflector combination device approximately 300-feet-long. The device was about 70% complete at the end of the day; so, the **Cameron County High School Forestry Club** worked to finish the device. The members of **Sinnemahoning Club** have expressed their desire to continue this project again during 1976.

Since the MEDIX RUN PROJECT last year, the **St. Marys High School Outdoor Club** has "adopted" MEDIX RUN; planning to build additional devices and maintain the existing ones. This year the club repaired some minor damage on existing devices and installed two additional channel blocks and eight stone deflectors.

The **Pine Creek Sportsmen Club**, in Tioga County, has worked on LICK RUN during the past two years. To date, they have installed three jack dams which are providing much needed cover on this stream.

The **Junior Camp Owners**, in Elk County, are working on WOLFLICK RUN. They installed their first jack dam this summer and hope to do at least three more this coming year.

These were some of the Northcentral Pennsylvania clubs and organizations involved with improving their favorite streams this past summer. We hope that your organization might also want to get involved with improving a stream in your area.



Combination channel block/deflector on Wykoff Run, above, was completed by the Sinnemahoning Sportsmen's Club and the Cameron Co. High School Forestry Club. The St. Marys High School Outdoor Club maintained existing devices on Medix Run, in Elk County, and constructed eight other deflectors like those shown below.





Above: The Emporium District YCC rebuilt this jack dam on Wykoff Run which was built originally in the 1930s. Journeying far from home, to waters they would most certainly fish but infrequently, members of Explorer Post 100, from Butler, and Explorer Post 800, of Carlisle, accompanied Fish Commissioner (and Scouter) Leonard Green to Cameron County to complete two erosion-preventing channel blocks on Wykoff Run like that below.



A COLD WATER PRIMER

BY ALAN MACKAY

MARINE SERVICES SPECIALIST

Back in October we put together an article on cold water boating and made the statement that, if things run true to form, four or five more people might lose their lives in boating accidents before the year ended. We were a little off in our predictions . . . *the tally reached eight!* At the risk of becoming redundant, we're going to approach the subject again in a little more depth.

Forty two boating fatalities were recorded in Pennsylvania during 1975. Of that total, 29 occurred during months other than June, July, and August. The majority of these deaths transpired when the water was at a temperature of 50 degrees or below.

Seven years ago, in the April 1969 issue of the *Angler*, C. James Harper authorized an article entitled "Cold Water — The Quick Killer". Harper wrote: "Most people realize that cold water kills a person faster than cold air* (see footnote). But very few people know just how fast cold water kills. I was only seventeen and aboard ship in the Bering Sea when I learned what cold water could do. The ship's captain announced that the ship wouldn't be turned around to pick up anyone washed overboard. The captain explained that a person couldn't live long enough in that water for a ship to turn around and race to their rescue.

"In Pennsylvania, duck hunters and fishermen push off from shore in overloaded cartop boats in water just as cold as the Bering Sea. Men who wouldn't dream of venturing on deck

of a large ship in the Bering Sea, push off from shore in the lakes and rivers of Pennsylvania with complete abandon, unaware of the possible dangers they may encounter, and in small craft which can be easily upset."

Bill Seibel, a reporter for the St. Louis Globe Democrat and an avid boatman, described his experience with a cold water plunge:

"Early in January, I took an accidentally-on-purpose flop into the water of Lake Pomme de Terre. If the water had been just four degrees colder, I'd have bounced rather than splashed.

"The sudden shock of that cold water knocked the wind out of me. Even though I knew the boat was just a few feet away, I was in a complete state of panic. My heart raced faster than if I had run a mile. I flailed the water helplessly for 10 to 15 seconds. I thought I was having a heart attack. I panted desperately, trying to get my breath back. And, the harder I flailed, the colder I got. This dunking was deliberate. I wanted to see what happened when you got dumped into cold water, really cold water."

Seibel stood on the bow of a bass boat and allowed himself to be "surprised" by having the boat reversed when he wasn't looking. He was dressed in wool shirt and pants, insulated hunting boots and a flotation suit. He also wore a wool watch cap and gloves. His description of panic is well worth remembering, especially since he knew what was coming.

This incident describes only one of the hazards of sudden cold water immersion. In this case, the reporter was well prepared for the experience and wore the proper clothing. Although he

was totally disoriented, his flotation suit kept him above the water. A heavily clothed sportsman, on the other hand, is most likely to make that same desperate gasp for breath and fill his lungs with water.

Bill Seibel's account of his experience touches on the first phase of the problem, overcoming the initial shock. He was in good health. Some people never get past this point. As an example, in 1975 a 13-year-old Boy Scout lost his life in Pennsylvania waters when he suffered a cardiac arrest as a result of immersion when his canoe capsized.

Should you survive the initial plunge, the second hazard becomes *hypothermia* — the lowering of the core temperature of the body to the point where the vital organs cease to function.

The leading cause of death among "survivors" of maritime disasters, i.e., those who *survived* the initial "collision," "explosion," etc., hypothermia can rapidly turn a survivor into a casualty. In the early stages, it might affect your judgment and physical coordination. Later stages, when a drop in body core temperature causes unconsciousness and death, can be reached within minutes in frigid waters.

An understanding of how the body protects itself against cold is useful in knowing how to improve your chances of survival. The human body's primary defense is shutting off the blood flow to the skin, letting it cool so it acts as an insulating layer for the body's core. Because of this, contrary to popular belief, exercising in cold water in an attempt to stay warm is

*The thermal conductivity of water is 32 times that of still air at the same temperature.



exactly the wrong thing to do.

Thrashing around or hard swimming sends blood to arm and leg muscles, keeping them warm instead of letting them cool. That heat is quickly lost to the water. Although pain in the limb extremities may be temporarily experienced, when in a relaxed position, permanent damage is quite remote.

The first decision to be made by a person in the water is whether or not it is practical to swim to shore. Researchers have found that the average person, even under the best conditions, and wearing a Personal Flotation Device (PFD), cannot expect to swim more than a mile in water with a temperature of around 50 degrees Fahrenheit. Once the possibility of swimming for shore has been eliminated, the survivor's remaining options depend upon whether or not he is wearing a PFD. Without a PFD, some degree of movement obviously is necessary to avoid drowning, and the resulting decrease in survival time is evidential. Research has revealed that the popular mode of "drownproofing," involving relaxing and submerging the head thus permitting rapid heat loss in frigid waters, may be more dangerous than treading water to keep the head clear of the surface.

A more effective means of increasing survival time is the "Heat-Escape-Lessening-Posture" (H.E.L.P.). H.E.L.P., in cold water involves holding the upper arms firmly against the sides of the chest, keeping the thighs together and raising the knees to protect the groin area (see illustration). Use of this posture, can result in a predicted survival increase of 50 per cent over that of the passive position. The goal is to minimize heat loss by reducing exertion and minimizing the body area exposed to the water.

It is important to note that even in relatively "warm" water — in the 70 degree range — the chance of suffering from hypothermia is still great if immersion is prolonged.

EMERGENCY TREATMENT

Even if a person is able to stay alive in frigid waters long enough to be rescued, the danger of his succumbing to the effects of hypothermia once on board the rescue vessel is still very great. If not recognized and treated promptly, this condition of subnormal body temperature can rapidly turn a survivor into a fatality. In fact, general

body hypothermia is the leading cause of death among survivors of shipwreck and other catastrophes at sea.

To understand the treatment of hypothermia, we must begin with the principle that any physical exertion by the victim serves to hasten the loss of precious body heat. In the same way that a person in the water reduces his chances for survival by undue effort, a victim struggling to aid his own rescue may drive his body temperature down below the danger level. Rescue attempts should therefore be made in a manner minimizing the amount of physical exertion by the survivor. This can most often be accomplished by sending someone suitably clothed to aid the victim in the rescue devices used.

A delay in treatment is an additional factor which may cost a person his life — *even after rescue*. Too often this delay is due to a lack of understanding of the nature and seriousness of hypothermia. Body temperature is the best indication of hypothermia, but only rectal temperatures are of any value in determining if a victim warrants special or prolonged treatment. Most men will survive if their rectal temperature does not fall below 95°F; most are able to return to useful activity if it does not drop below 91.4°F. When the rectal temperature falls to 89.6°F or below, consciousness becomes clouded. At a temperature of 87.8°F there is only a 50 percent chance of survival; few survive if their rectal temperature falls below 80°F.

In addition to a low rectal temperature, a blood pressure reading of less than 100 mm Hg. Systolic is a good indication that the victim suffers from hypothermia.

When neither a rectal thermometer nor blood pressure apparatus is available, the following outwardly visible symptoms will help identify the hypothermia victim:

PULSE: Pulsebeat is generally slow and often irregular.

LEVEL OF CONSCIOUSNESS: Individuals suffering from hypothermia will tend to lose consciousness. Their awareness becomes clouded as their body temperature approaches 90°F and they generally become unconscious at 86°F.

GENERAL: The hypothermia victim is pale in appearance, his pupils are constricted and react poorly to light, and his respiration is slow and

labored. He will usually be shivering violently, with frequent muscular rigidity. He may appear to be intoxicated.

Emergency treatment should begin as soon as possible to stop the drop in body temperature. Evacuation to a medical facility should be accomplished after or during emergency treatment.

Wet clothing should be removed. If the patient's body temperature is 95°F or above, no treatment is necessary other than providing dry clothing and removing the victim to a warm compartment. If this cannot be accomplished, the wet clothing should not be removed. Under these circumstances, wet clothing is better than nothing.

Warm the victim rapidly, but do not burn or overheat him. The most effective warming treatment is a bath with water temperatures over 100°F — but not over 155°F. If a tub is not available, use an inflated life raft. If possible the victim should be placed in the tub so that his limbs remain out of the water.

A shower with water at 115°F is the next most preferable method. The victim should be wrapped in towels or in a blanket. If a shower is unavailable, apply warmed blankets in a warm cabin with a heating pad or hot water bottle on the victim's chest. As a last resort, apply body warmth by direct contact with a member of the rescue team.

The victim's respiration should be observed closely. Remove any secretions. If a suction unit is available, a catheter suction of the trachea is advisable if breathing is impaired.

The victim should take nothing orally. Watch for vomiting and the possibility of aspiration (taking into the lungs) of vomitus. *Alcohol is absolutely forbidden as a treatment for deep hypothermia!* Treat the victim for shock.

I hope by this point, if anybody is still with me, that we've established a cause-and-effect relationship. We've pretty much defined hypothermia and offered some advice on treatment. We've neglected prevention because the only thing you can say about it is, "*Don't fall in the water!*" All of the rules of safe boat operation apply in any water situation, regardless of temperature. Perhaps the knowledge of the effects of cold water will prompt a little extra concern.

WARNING!

COLD WATER..KILLS!

SUDDEN IMMERSION IN COLD WATER WILL SAP THE STRENGTH OF THE STRONGEST SWIMMER!

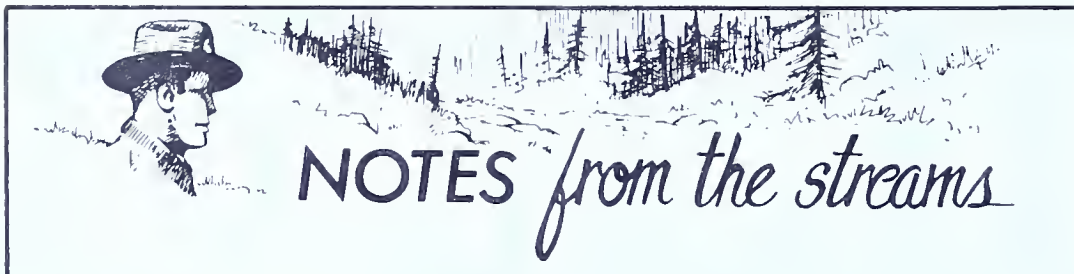
*LIFE EXPECTANCY IN 33 TO 40 DEGREE WATER MAY BE SHORTENED TO 15 MINUTES, AND IN 40 TO 50 DEGREE WATER, TO 30 MINUTES..***WHEN WEARING A LIFE PRESERVER..**
...EVEN LESS WITHOUT!

BE EXTREMELY CAUTIOUS WHEN BOATING IN COLD WATER!



**WEAR A
LIFE
PRESERVER!**

PENNSYLVANIA FISH COMMISSION



"TOUCHÉ"!

While attending a meeting with Assistant Supervisor Perry, a young conservationist and Officer Perry got into a personal debate as to which was worse: litter — or pollution. The conservationist "person" contended that litter was a much worse violation and contributed a more serious situation to our environment than did pollution. Officer Perry then offered, "Suppose we have two good drinking water springs; you throw some beer cans in mine, and I will dump some sewage in your spring. I can still take a drink out of my spring. What are you going to do when you get thirsty?" The pretty young conservationist "person" was at a loss for words.

Claude M. Neifert
Waterways Patrolman
Luzerne County

ENERGY SAVER

A story related to me by Deputy Waterways Patrolman Burkett about an occurrence he witnessed while patrolling the Conococheague Creek in the vicinity of the Martins Mill Bridge last year. Upon approaching the stream, Deputy Burkett observed a gentleman sitting on a lounge . . . not unusual, except that this lounge was in the creek — submerged to a depth that would allow an inch or two of water to flow over the seat, thus keeping the occupant cool while enjoying the beautiful day! A very good way to save the energy used by an air conditioner, but yet stay cool while enjoying the beauty of the outdoors.

Larry V. Boor
Waterways Patrolman
Franklin County

FETCH, BOY, FETCH!

During a bass fishing expedition one warm evening last June, a deputy and I observed two gentlemen fishing in one of the local water dams. It looked as though the two gents were thoroughly enjoying themselves . . . if empty beer cans were any indication of enjoyment. We talked with the men for a while and proceeded on our way and paused to "observe" the fishermen from a distance. It was obvious that the "beverage" was getting to the men when we observed their lighted gas lantern

being bumped down over the dam — plummeting into about eight feet of water! It took the men about a half-hour to retrieve their lantern from the bottom of the lake, gather up their gear, and leave for home (or the nearest lounge that was still open!).

Returning to the fishing site of these gentlemen, I noticed that they took everything along but their empty beer and soda cans. The officer with me said that one of the men fished there quite often and that he would be able to get the needed information for a littering prosecution. Upon confronting this man, my deputy learned that the violator realized what he had done that evening and was coming out to the littered site the next day to clean up the cans. He was also taking his "retriever" — just in case some of the cans fell into the water!

To top it all off, the man also requested a hearing. I hope, for his sake, that the magistrate likes "retrievers" who fetch errant beer cans!

Stanley D. Plevyak
Waterways Patrolman
Washington County

TOO BAD!

While on patrol on Harveys Lake shortly before Labor Day, Officer Urban and I found a large dead walleye which had floated into shore. This walleye measured 38-inches-long and appeared to have passed away from old age. Just a reminder to our readers, the state record for walleye caught with conventional tackle is 36 inches!

Claude M. Neifert
Waterways Patrolman
Luzerne County

STAY HOME!

It seems that a lot of people these days (as in the past) are traveling to far places to fish. Canada and Alaska are examples, and are probably the most common places where Americans generally go fishing.

These same people talk about how good the fishing is in these far-off places. I have often wondered what they would say if they could ask someone, from, let's say Alaska, how our fishing stacked up to Alaska's fishing. Now everyone is going to say, "Nobody would come from Alaska to fish in good old Pennsylvania!"

Well, one angler did; and, his name and address: Theodore R. Dunn, 429-D Street, Anchorage, Alaska, 99501. Mr. Dunn comes here once a year to fish for trout in the Yellow Breeches Creek in Cumberland County! He stated that he enjoyed the fishing here and it was *good fishing*. His presence and his statement are pretty good evidence that fishing here in our home state must be good! And, incidently, another tourist license was taken out for a gentleman from France. I cannot tell you his name simply because I neither write nor speak French!

Warren W. Singer, Jr.
Waterways Patrolman
Adams/N. York Counties

RAINING VIOLETS? NOPE, SUCKERS!

The following was related to me by a friend of Janie Manning. It seems a group of girls were out horseback riding when Janie saw an object falling from the sky. She didn't want the others to think she was seeing things so she checked it out herself. Lo and behold, there lay a 12-inch *sucker*! She then called the others and showed it to them. They all swear they had not been in the Red Lion Inn for at least three days before this incident!

Stephan A. Shabbick
Waterways Patrolman
Wyoming County

WELCOME ADDITION—

A 19-inch striped bass was caught from the Shenango Reservoir. This fish was only two years old; and, according to our biologists, this fish grew 10 inches in one year! It looks as if the Mercer County fishermen should be getting some good fishing on the striped bass (*Morone saxatilis*).

James E. Ansell
Waterways Patrolman
Mercer County

ONE-UPMANSHIP!

After reading the past reviews in the papers of the movie, "Jaws," I have struck on a fund-raising idea for the Fish Commission. We should produce a sequel to that movie and call ours "Lips." There would be very little overhead in filming it. It could all take place at the spillway at Pymatuning when someone falls into a school of carp and is mistaken for a loaf of bread!

Robert Lynn Steiner
Waterways Patrolman
Western Area

STREAMSIDE CHATTER—

Some of the following statements were overheard as trout were stocked in our local streams:

"They feed them so they don't bite!"

"They cut off or lower the oxygen level in the trucks to make the fish sick so they won't bite!"

"They are coming to the top to get air."

"They're taking something off the top of the water that we can't see."

"Anybody who complains about these beautiful trout should be getting food stamps." (That's a refreshing change!)

"I only fish for native brook trout." (This fellow won the foot race to the hole that had just been stocked with hatchery trout!)

From a fly fisherman enjoying a beautiful day on his favorite stream, rudely interrupted as the fish truck pulls in to his spot: *"Why are you stocking this stream today?"*

And then, to the waterways patrolman who had just spent the last four hours stocking two other streams, as he arrives at the third stream scheduled for the day, a fisherman remarks, *"Where the H— have you been?"*

(That night a very tired Elk County Waterways Patrolman has a dream in which he shoots five truck followers . . . seeing he hasn't missed, he awakens in a cold sweat!)

Bernard D. Ambrose
Waterways Patrolman
Elk County

"LIKEWISE"!

While on routine fish law patrol of Bradys Run Park Lake, I approached a young couple and asked, "How are they hitting?" They shrugged their shoulders and replied, "Nothing!" As I continued on, a little blond-haired, blue-eyed girl of about three looked up at me with a big smile and exclaimed, "We didn't get *nothing*, too!"

Don Parrish
Waterways Patrolman
Beaver County

COMPACT!

The other day, I saw an all purpose fishing rig: a can of beer with the line wrapped around it, a shad dart as a lure, and a piece of boiled shrimp for bait! A person can carry their meal, drink and fishing equipment all in a package a little larger than a beer can. Don't know how the catching was . . . I was afraid to watch!

Joseph E. Bartley
Waterways Patrolman
Pike County

COMEBACK—

I have witnessed an unusually large number of ospreys working the Driftwood Branch and the Fork. These beautiful and very talented fishing birds were quite scarce in the county but are apparently making some recovery. I had an occasion to watch one in action at Stevenson Dam recently. After about 6 dives, he still didn't manage to get his fish, but what a beautiful sight he was to see. The protection of hawks and other wild birds, I hope, will replenish some of our scarce birds. The osprey always reminds me of a dignified gentleman with a tux on, when you see him sitting near a stream and surveying the situation.

Stanley G. Hastings
Waterways Patrolman
Cameron County

FINE COOPERATION—

The Tioga County Consolidated Sportsmen Clubs sponsored a two-day Open House at the Whitneyville Fair Grounds last September 28th and 29th, in conjunction with National Hunting and Fishing Day. All the clubs in the county were given the opportunity to set up an exhibit and the Fish and Game Commissions, Bureau of Forestry, S.C.S., the Pa. Trapper's Association, and some others all had exhibits there. This was the first time for this type program and I believe many of the people who attended were really surprised to find out all the things that the local sportsmen are involved in.

Raymond Hoover
Waterways Patrolman
Tioga County

BE PATIENT—

The brook trout streams in Cameron County receive quite a load of pressure when stocked streams remain above normal and water remains cold, keeping the trout inactive. Keep your spirits up — when the trout start to work there will be plenty of them to catch!

Stanley G. Hastings
Waterways Patrolman
Cameron County

HAPPY HELPERS—

I would like to take this opportunity to thank the local Wyoming County sportsmen, also the Luzerne, Lackawanna and Susquehanna County sportsmen for their fine assistance in distribution of the preseason trout in my district. A special thanks to Michael Houdock, Jr., and his friends who walked many miles with float-boxes and stocked trout in areas that were

impossible to reach without their help. According to the truck drivers I have more help in this area than anyone and for this many, many thanks. It sure is great to see old friends out year after year. Along with the many thanks, I would like to make just one other comment: In future stockings, for those who know where the next stop is going to be and go on ahead, *please leave enough room for the truck to get off the road!*

Stephen A. Shabbick
Waterways Patrolman
Wyoming County

ONE THAT GOT AWAY!

While on patrol at Walnut Creek during the Coho run, we see many anglers line the channel and pier when weather conditions on the lake are rough and it becomes quite crowded at times on weekends. When someone hooks a fish, most anglers reel in their lines to give him an opportunity to land the fish. On one occasion an angler hooked a nice fish and was entangled with about four other lines and lures. He got excited and yelled, "Cut your lines off!" One obliging angler did . . . along with *his* line, and the fish was on his way! Needless to say there were some choice words exchanged.

William Mantzell
Waterways Patrolman
E/Crawford County

"OLD WIVES TALES"

"A license is not required by Pennsylvania residents to fish in the Delaware River below Trenton Falls."

WRONG! A license is required by Pennsylvania residents to fish the river in the tidal portion, whether by boat or wading.

"A Pennsylvania resident may not embark or disembark from the New Jersey shore with fish legally taken in the Delaware River unless he has a New Jersey nonresident license."

WRONG! A properly licensed fisherman, using a boat, may land or launch his craft from the New Jersey shore of the river without fear of being apprehended — as long as he complies with the fish laws relating to the Delaware River, which are concurrent between the states of New Jersey and Pennsylvania.

"Foul-hooked fish are legal to keep in Pennsylvania."

WRONG! Fish that are *accidentally* hooked in the body must be released. It is also illegal to *intentionally* foul hook any fish — including carp and suckers.

Jay B. Johnston
Waterways Patrolman
Bucks County

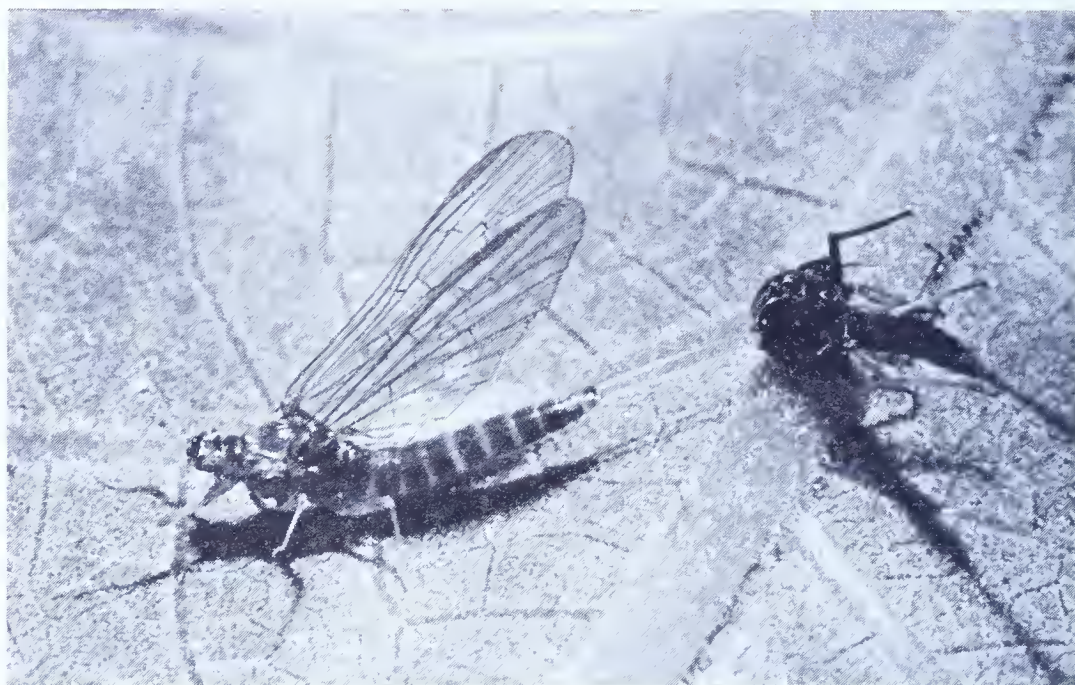
FLY TYING

The Diminutive Baetis Spinners

by Chauncey K. Lively
photos by the author

The little, two-tailed mayflies of the genus *Baetis* are native to most trout streams in Pennsylvania and trout seem to be particularly fond of them. The duns generally appear sporadically during daylight hours and, despite their small size, they are fairly easy to see on the water because their upright, smoky-gray wings flash in the sunlight. The fall of *Baetis* spinners is yet another matter, however, particularly when it comes in the waning hours of daylight. Like any small, flush-floating insects, *Baetis* spinners are difficult to detect on the water in failing light. Often the trout offer the first clue that a spinner fall is developing when they begin rising in quiet, rhythmic fashion. Of course, the rise to midges is sometimes similar but confirmation of one or the other may be made by sampling the surface film with a fine-meshed net. A small, lightweight aquarium net can be easily clipped to the vest and is a worthwhile addition to any fly fisher's gear.

Fishing the tiny spent spinners at dusk is almost like fishing after dark; the precise placement of the fly depends more on instinct than on sight for it is rare that the low-flying fly can be seen at this hour. If the stream is not in shadow the angler can sometimes see the silhouette of his leader on the silvery surface and this is an aid in locating one's fly. But even without the visual advantage it is surprising how effectively one adapts to fishing at twilight, casting from judgment alone. Random casting is rarely beneficial; one's attention should be concentrated on a specific rising trout. Each rise should be treated as if it were to the angler's fly and if indeed it is, only a gentle lift of the rod tip is necessary to make connection. Of course, there will be many times when raising the rod brings nothing but an empty void; but,



Baetis cingulatus - a female spinner, freshly transposed.

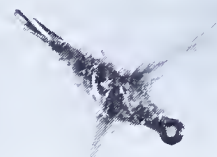
patience and persistence eventually pay off.

A couple of years ago we encountered a rather heavy fall of *Baetis levitans* spinners on Falling Springs. We were fishing a narrow stretch and the trout were lined up along the grassy banks, sipping the drifting insects with metronomic precision. Casts were timed so that the fly would pass over the trout at the moment he was ready to take another spinner, hoping he would take mine instead. It was entirely a procedure of guesswork in the dim light because I couldn't see my fly, but evidently I was doing something right for on every third or fourth lift I found myself attached to a solidly hooked trout.

One evening last June, on the Battenkill, we were forewarned of a spinner fall when we saw a swarm of male *Baetis* spinners form over the tail of a riffle, flitting up and down like miniature yo-yos, in readiness for the mating ritual. A little later trout began rising softly in the smooth-topped water and we were prepared for them, having already attached representations of female *Baetis* spinners to our leaders. Again, in the twilight, the placement of the fly was, of necessity, "by guess and by gosh," but we were soon rewarded with the satisfying surge of a good trout.

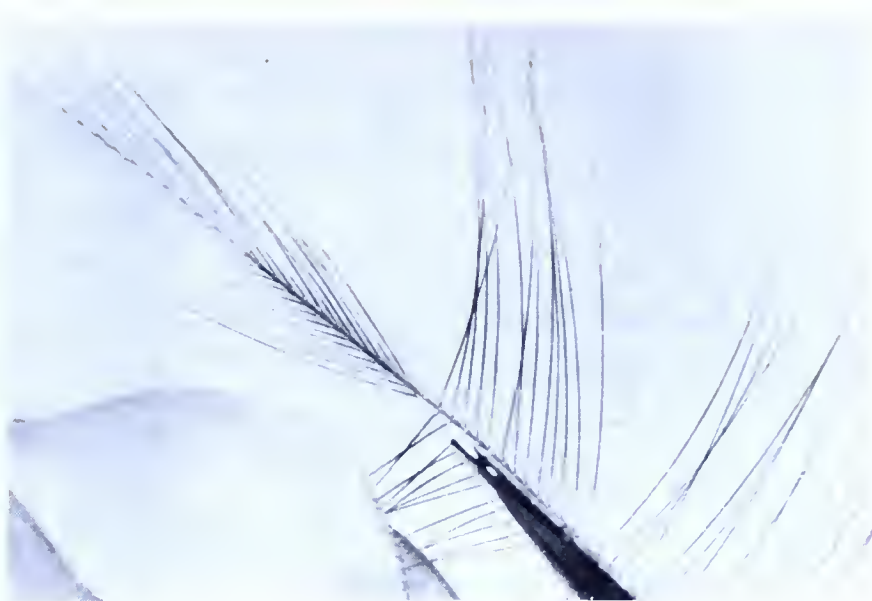
Although male *Baetis* spinners vary in coloration among the various species, the females generally have brown to brownish-olive bodies. This

is a fortunate circumstance because it minimizes the number of patterns required to cover several species. The BAETIS SPINNER pattern we are tying this month matches the female imago of most eastern species of this genus, provided it is dressed in sizes #20 and #22. The spent wings are fashioned from two small bunches of medium dun hackle barbuces laid together to form a single bunch. The tips of one bunch are matched to the butts of the other and the barbs are mixed. This gives both wings a uniform density which would be lacking if one wing had only barbuce tips and the other, butts. If you made a "HAIR TAMPER," described in last month's *Angler*, the mixing of the barbuces is easy; otherwise, they must be mixed and matched by hand. Either way, it's not a difficult chore.

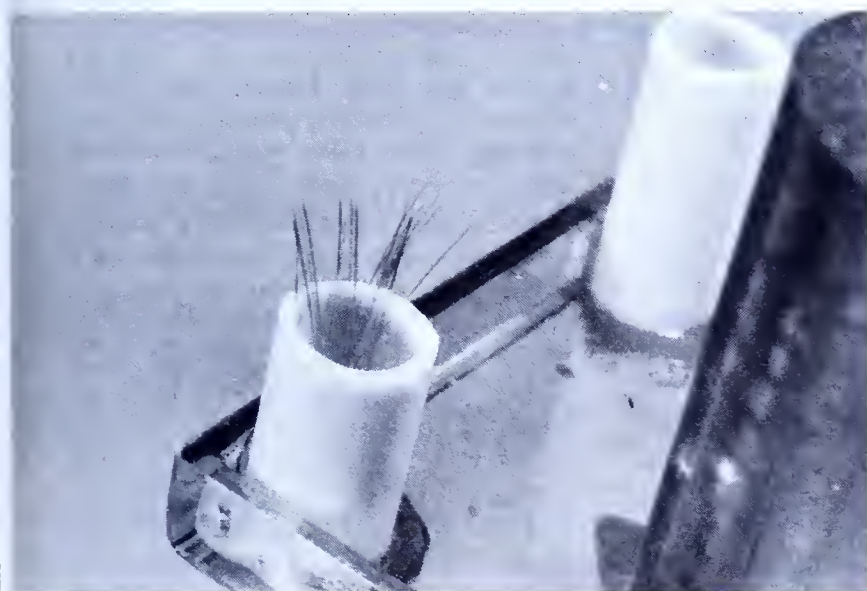




Bind fine, olive tying thread well behind the eye of a light-wire hook. Sizes #20 and #22 are useful, above left. Then, select a fairly large medium dun hackle and stroke downward below tip, causing barbs to stand out at right angles, above right. Separate about 12 to 15 barbs and grasp them by the



tips. Cut the butts near the center rib and place the bunch, tips down, in the smallest tube of the Hair Tamper. Then turn the hackle around and cut an equal number of barbs from the opposite side of the rib. Place this bunch in the Tamper with butts down.



Mix the barbules in the Tamper, tap it on a hard surface to make ends even and remove bunch (Lacking a Tamper, match tips of one bunch with butts of other and mix by hand), above left. Bind combined barbules to top of hook at center of bunch with figure-8 turns. Trim ends of barbs to finished wing



length, equal to length of hook, above right. Then bring thread up through barbs on near side, over shank and down through barbs on far side. Then make a lateral turn snug under base of wings, flattening wings and spreading barbules.



Wind thread to bend and tie in two dun barbules for tails, above left. Then wax about 3" of the thread next to the hook and apply a dubbing of brownish fur or synthetic. Wind dubbing forward to form tapered abdomen. Make a lateral turn of dubbed thread under base of wings, above right, then make a



figure-8 turn around wings. Complete thorax in front of wings. After whip-fining head, remove thread and apply a drop of lacquer to finish wings and to top of thorax. This completes the Baetis Spinner shown at the bottom of the preceding page.

CO-OP NEWS

by Bill Porter



Water is piped to nursery from dam upstream on Mill Creek

Located in a deep mountain valley with a tumbling picturesque mountain stream, the Canton Rod and Gun Club, Bradford County, is past due for some recognition. So here is their story, and a rather fascinating one at that.

Approved in 1961, the group got its first fish in 1962 and has been functioning ever since. The initiative back in those early days was supplied by such men as Irvin E. Machmer and Dr. Jerome "J.K." Young, who was president of the club at the beginning of the nursery project. "Doc" says that Irv was the prime mover of the operation and the club testified to this fact by naming the site the Irvin E. Machmer Nursery in his memory.

But going on with the history, Irv and "J.K." dug out the first pond along Mill Creek above the borough of Canton. The notion caught on and others got into the mood and soon the local Explorer Scouts had done their share as well as adults in and out of the club.

But there is a piece of the story that is missing. Before any digging and building could be done, a site had to be found. Such a site was owned by the Canton Borough Authority and after some friendly persuasion, the old water supply dam and area was turned over to the club. Now on with the digging.

A series of stair-step raceways were built, essentially using poured concrete footers, bottoms and sides. An intake system involving some of the original pipe work and pumphouse controls were utilized and the club was in business.

As time passed, changes and improvements were made to the

nursery and more are intended. Screens were added to cover the complete unit and reduce predator problems, which ran the range from mink to kingfishers. There is complete fencing around the raceway and a sturdy metal gate to discourage other kinds of predators. And a new intake system is being planned, but more of that a bit later.

Things were going well for the club and about 12,000 fish were being handled at peak growing periods. Brook trout were the preferred species as they were available and rainbows were the second choice. Area streams, including the Schrader, Tioga, Mill Creek, Little Scrader, and others received the trout. And then along came *Agnes* — yes, Bradford County took its beating, too.

As Mill Creek rose to flood crest, debris washed down the mountain sides and filled the dam. Water was everywhere and in force. Heroic efforts on the parts of club members and others saved a portion of the trout and some of the property. And when the flood subsided, the Canton sportsmen had to about start over, which they did. Then, too short of a time later, *Eloise* dumped another deluge on the area and again Mill Creek's dam filled with rock and mountain soil. Again, club members responded to the call; but it was obvious that something had to be done about an intake system that would be impervious to the ravages of severe storms. And this brings us back to the paragraph above.

On our visit in late 1975, Bob

Brown and Paul Byers, Fish Commission, spent considerable time working with club members, Lynn May, nursery manager, and Ray Seely, a past president and a builder by trade, going over plans to set up a system that would be above the apex of the dam and impervious to debris being washed down into the dam proper. Construction will start as weather permits in that wintry blustery part of the state. And according to Miles Brown, current president and one of the heroes of the *Agnes* crisis, there won't be any more problems with the dam and it can still be a pretty sight whether the upstream side is filled with rocks or not — or at least words to that effect.

Somewhat relative to the new construction work on the intake system and the severe winter conditions, the club held a fall stocking of all of their fish. This may be a bit unusual, but under the circumstances it certainly seems justified. And as an additional precaution, the raceway beds were filled with straw as a protection against frost and ice damage, that surely would occur otherwise.

And that just about does it for the Canton Rod and Gun Club and their Irvin E. Machmer Nursery. Well, not quite . . . because "J.K." had us come in out of the cold rain for a cup of coffee before the long ride home. As he talked of the history of the nursery and its future plans, one got the feeling of enthusiasm and drive which spoke well for the future of cooperative nursery trout in Bradford County.

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Fish in shallow water are feeding fish. If they were just resting, they would spend their time in deep water, which gives them more protection

Spraying dry flies with Scotchguard is not enough to make them float satisfactorily. This substance will *waterproof* flies, but after it is dry mucilin or silicone should be applied to make them float.

Use very small treble hooks rather than a single hook in fishing for carp. Treble hooks hold carp bait better and increase the chance of hooking a fish that takes the bait.

A tiny nick or rough spot on a monofilament line or leader, or a knot in either, is a danger signal. The mono is weaker at that particular point and quite likely to break under strain.

Short, stiff droppers on a wet fly leader are essential if the droppers are not to wrap around the leader itself when two or three wet flies are cast. To make droppers use stiff monofilament, about 8-pound-test, cut into lengths of about six inches. If the wet fly leader has loops, use flies that have stiff snells.

Don't bunch a worm on a hook. Hook a worm through its collar or about a third of the way from either end. Then the worm will be able to wriggle in the water and have a very natural appearance.

Wet flies must get down into the water more than a foot or so if they are to be effective. This is especially true in quiet water. In riffles, deep fishing is not so essential because swirling currents carry natural food at all depths.

Every trout has a blind spot, behind and below it. Because of the position of its eyes, however, a trout can easily spot a disturbance in the water to either side, or directly in front of it.

Don't be upset if the streamer fly you are using does not sink deep into the water. Streamers imitate minnows, and minnows frequently move about only slightly below the surface of the water.

Casting a long line, in fishing with wet flies or nymphs, is a handicap. The angler cannot feel the gentle strike of a trout when his line is lying in loops and coils on the water or arched in a big bow under the surface.

Always wade upstream, no matter what species of fish you are seeking or whether you are using bait or artificial lures. Fish lie with their heads into the current. An angler moving downstream through the water can dislodge bits of debris that will immediately alarm fish.

To offset the handicaps of high, swift water, carefully work the pockets at stream bends and along shorelines where the current loses speed.

Big fish can be caught on small hooks, but small fish are difficult to hook on big hooks. The point is to match the size of the hook to the size of the fish you are trying to catch; particularly to the size of the mouth of the fish.

In high, swift water fish stay deep, near bottom, where the current is not so strong. Lure or bait has to go deep to catch fish under such conditions.

Wade the shallow side of a stream and fish the deeper side, as a rule. But at the same time keep an eye on shallow water ahead. It may include a pocket of deeper water that can shelter a fish, or you may see a fish feeding in shallows.

fishing outlook

continued from page 3.

Stan Plevyak, Washington County Waterways Patrolman, tells us that his district is starting to see some good musky fishing.

He tells us that Buffalo Creek from the West Virginia line up to the Taylorstown area is producing muskies in the 36-inch class. Northerns measuring 33 inches have also been landed. Most of the nice sized fish, Plevyak said, are taken by small-mouth bass fishermen on small spinners, plugs and minnows — though the big minnow type lures are musky catchers too.

Plevyak also said that a few muskies have been spotted swimming around Dutch Fork Lake in Claysville.

The top musky spot in Washington County is Ten Mile Creek from the Monongahela up to the Marianna area and the best places are the deeper holes. Legal muskies in these waters

tape out between 30 and 38 inches. Large chubs and suckers, and shallow-running plugs like the Cisco Kid, single and double jointed minnow-type lures, from six inches up, all catch muskies.

Over the past two years, the Washington County area of the Monongahela River has been stocked with 4600 fingerlings and they've taken hold. A 37-incher was retrieved from a water intake pipe at a Monessen steel mill in Westmoreland County. And Plevyak has also seen two headless muskies in the river around three-feet-long that probably collided with a boat propeller.

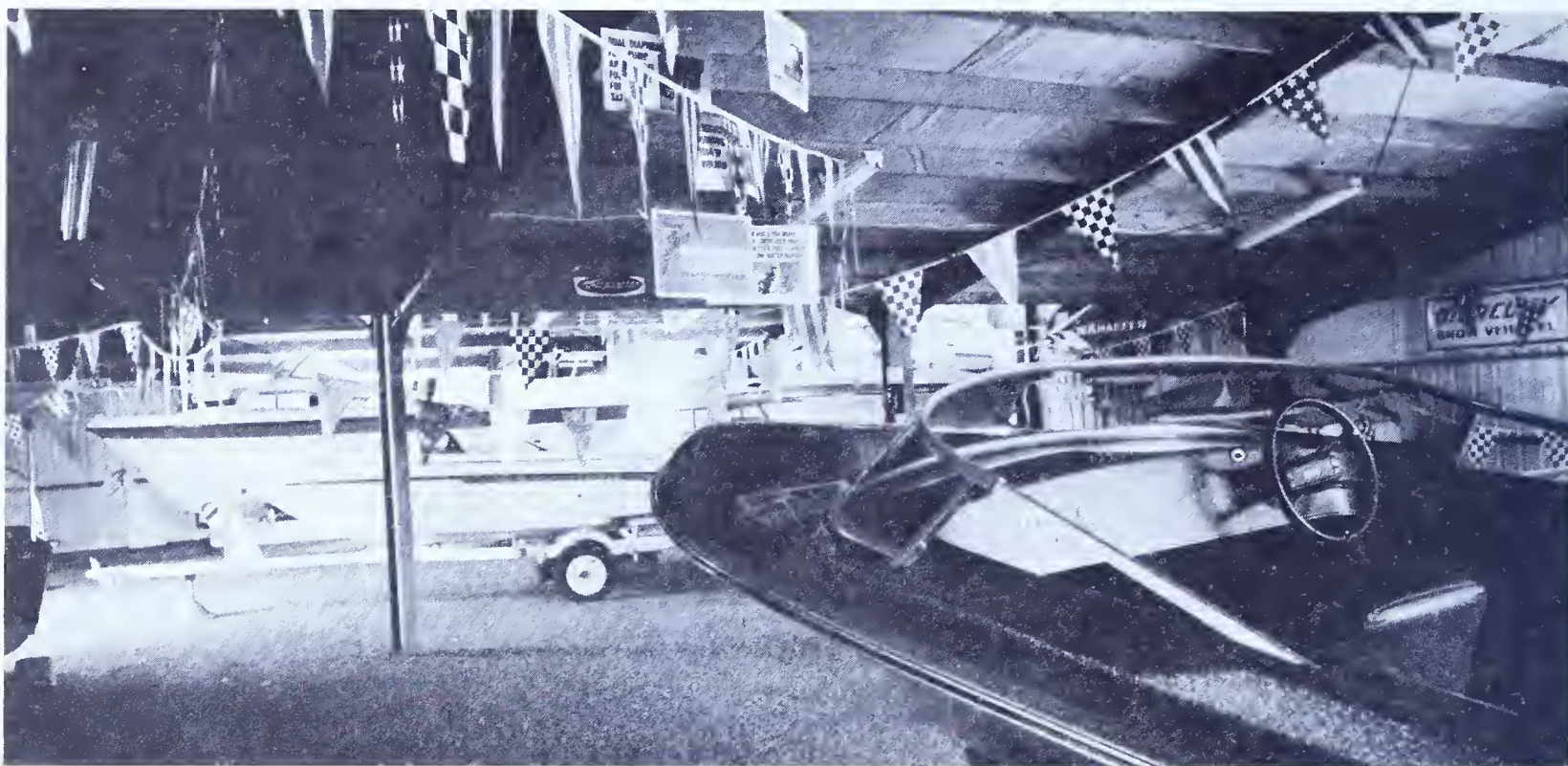
In the southeast, the Perkiomen Creek from Green Lane down to its junction with the Schuylkill River sees a lot of musky action in the pools. Large minnow-type lures and big spoons are popular with both the

fishermen and the fish as are 6- to 8-inch suckers.

The pool at the Schuylkill's confluence turns up muskies regularly—along with three-foot-long northers!

In Wyoming County, District Waterways Patrolman Stephen Shabbick said that the Tunkhannock Creek at its Susquehanna confluence gets the nod for muskies. Anglers have taken brutes up to 46-inches-long . . . sometimes *two and three per fisherman*. Walleyes up to 23 inches are also caught.

Two popular lures in this part of the state are jigs and the Mr. Twister. Both are most effective when retrieved slowly. The Mr. Twister is weighted with a splitshot placed a foot ahead of the lure and an extra hook is run through the tail to take care of short strikes.



Ashore & Afloat

by Gene Winters

It is very easy to wrap ourselves in a cocoon of personal privacy or insulate ourselves in an "ivory tower" from the real world around us. Then, when the bubble of individual isolation bursts, we are dismayed, regretful, and often bitter!

That profile fits most boatowners at one time or another. Far too often, when that bubble bursts, we are apt to blame it on the "other guy." Since the other guy is often the marine dealer or marina operator, I have long wondered what *they* really think of *us*! Recently I headed toward Harrisburg in an attempt to find out; to see if I could draw out some representative answers from Lakeside Marine's Earl Brightbill and his son, Robert. For several hours that evening, long after the business had been put to bed for

the night, we chatted about us, the boaters.

Apparently the single error most committed by boaters, particularly newcomers, is simple failure to read, understand and follow the owner's manual. Those who fail to do so, it appears, are invariably the ones who never do or have done any preventive maintenance or periodic servicing. Then, when a piece of equipment or machinery malfunctions or fails, they scream "quality control failure" or take off for a piece of the dealer's hide. Dealers also lament the ill-advised who head for the auto section of the discount store to buy the cheapest oil they can find. What they fail to realize is oil is graded by specifications other than weight alone and, in many cases, oils are unique blends specifically tailored to marine engine use. Apparently, too, many newcomers (and a few oldtimers, also) pay insufficient attention to the importance of the proper gas/oil ratio mixture required for outboards. Too many of us tend to be penny-wise and pound-foolish or simply in too much of a hurry to get away from the gas dock.

Many boatowners get into trouble simply because they won't ask for (or follow) professional advice. Most marine dealers feel giving advice is part of their service and have no secret techniques they won't share with their customers. Hopefully, they have

master mechanics. Like most fields, the day of the "part changer" is gone forever! Frequent attendance at a manufacturer's plant to obtain specialized training is no longer an exercise in public relations but practically mandatory to keep a mechanic up with the rapidly changing state-of-the-art. While it is, of course, possible for some backyard mechanics to do some service and repair work, there is little question today's powerful, ultrasophisticated engines with electronic ignitions and complex circuitry and mechanisms are best left to the experts! Although individual components may have a longer life these days, the *systems* in which they are used *do* require periodic servicing and maintenance to retain dependability and performance. And, even a shop filled to overflowing with the latest test equipment is of little value if service personnel are not properly trained to utilize the instruments and interpret and analyze the readouts.

Another problem area is the owner who knows what happened to a unit or what is broken but tells the dealer only in vague, evasive terms. Similarly, like most of us, an owner who has misapplied or misused a piece of equipment is understandably but wrongly reluctant to admit his mistake. But the less time it takes a mechanic to figure out what happened, what is wrong and fix it, the smaller the bill. Going in

Silent now, this showroom will soon come alive as the weather warms and each sales person will be expected to know his product and his customer's needs. Helping one make the best selection is an important and valuable service provided by a good dealer.

with a red face may be unpleasant but you may leave with a smile on your face and a fatter checkbook; at marine shops, like auto, labor time translates into dollars. Mixed in along about here are a sprinkling of owners who apparently feel they are entitled to perpetual care and limitless warranty. Throw in some thoughtless ones who make the mechanic wade through a mountain of beer cans, dead worms and fishy entrails, paper cups and other debris just to find the unit, much less service it! (Notice the similarity to their auto's condition?)

Marine dealers, like most other businesses, have opened themselves to criticism over the years; some deserved, some not. To spot shortcomings and complacency, more and more

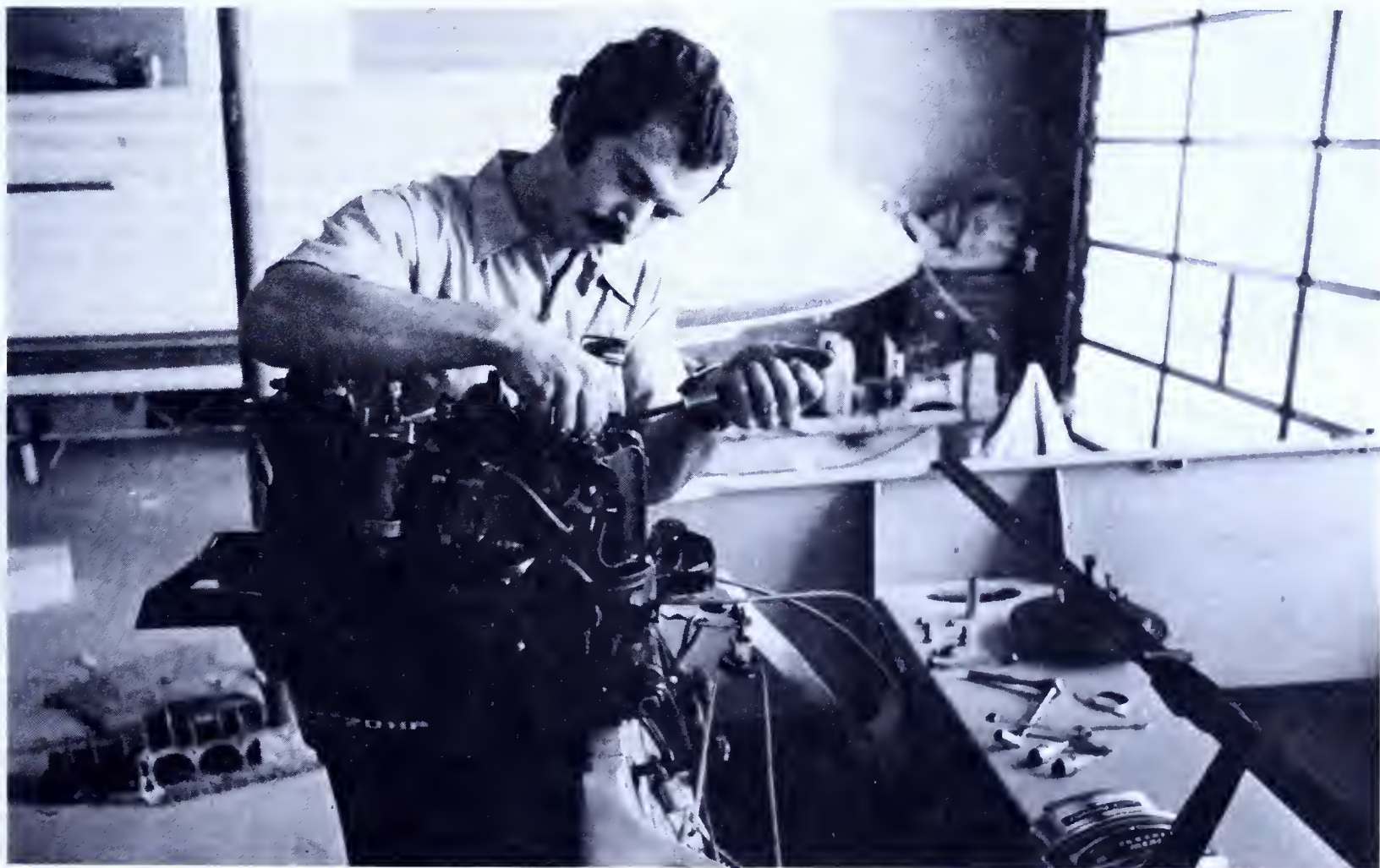
dealers are sitting down and criticizing *themselves*. If they feel their self-critique is valid, they take appropriate steps. For example, more and more dealers are making it *mandatory* that their service manager *schedule an appointment* with a boat/engine purchaser and go over thoroughly not only all operating procedures, but general use/maintenance recommendations and policies, as well. In addition, more conscientious dealers insist both sales and service personnel inspect and understand the products they sell, including accessories. These same dealers usually pay special attention to safety equipment and related products.

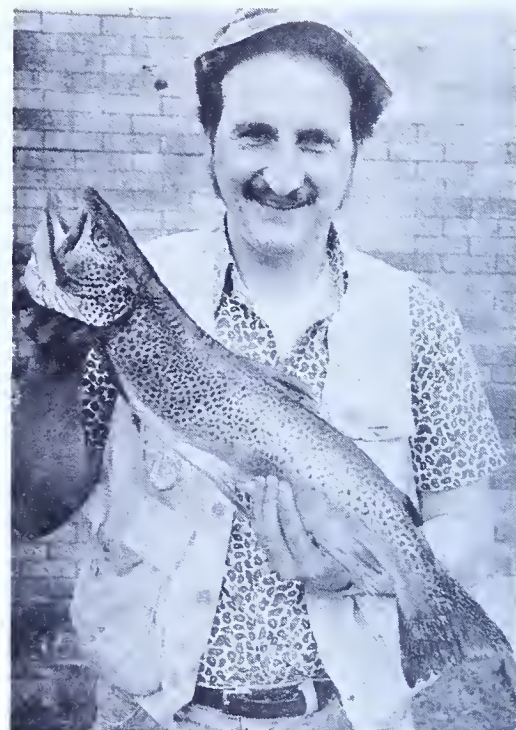
The purpose of this article was to find out what at least one marine dealer thought about *the boaters*. I was looking for *our* shortcomings and I must confess, frank and open as the Brightbills were, it was difficult. Simply because they, like most marine dealers, are highly enthusiastic about their chosen profession and, what's more, apparently like us! Today's buyers are, dealers point out with

pride, smarter, more sophisticated, and more receptive to help and advice. In addition, even in a shaky economic market, they demand quality along with price! The Brightbills feel this is largely thanks to the excellent job in public education the state and boating organizations have performed and support these programs actively and fully. The night I was there, they showed with understandable pride their new special-purpose room which is available to such organizations for boating classes, meetings, etc. More and more dealers are making such facilities available and the apparent fact that marine dealers not only enjoy their professional life but also their social/working relationship with the boating fraternity should be a model for more industries.

One message should be undeniably clear to dealers and boaters alike . . . the more we understand and appreciate the other's problems and aims, the better off we all shall be. I guess what it really boils down to once again is *communicating* with each other! "10-4"?

Preventive maintenance and periodic tune-ups can often prevent major breakdowns and more expensive repairs.





THEY'RE AT IT AGAIN!

Pennsylvania anglers have been recording some fine catches over the past few months. Top Row: Robert Mussel, left, with a nice pair of largemouth bass taken from Cooks Pond in Susquehanna County; largest was 23-3/8 inches long, weighed nearly 7 pounds. Harry Horner, center, hefts an 18 pound Chinook Salmon he took from Erie — it measured 35-3/4 inches long. Ken Sollenberger's 25 inch, 4 pound 12 ounce brown trout, right, was taken from the Juniata River in Huntingdon County. Tom Kiefer, left, caught that 24-1/8 inch brown trout from Falling Springs Creek over in Franklin County. Floyd Stiles took that 41-3/4 inch northern from Kinzua Dam, near the "Red Bridge," area, below left. It tipped the scales at 19-3/4 pounds. Nathaniel Bey, below right, took his 46-1/2 inch muskellunge from Pymatuning Lake. That big one weighed in at a whopping 32 pounds! That's meat on the table!



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Trout Season is just around the corner!

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everyone
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issue!



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APRIL - 1976

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Magazine...

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PERIODICALS SECTION

APR 9 1976

SCIENTIFICALLY SOUND?



On February 10, 1976, the Pennsylvania Senate by an overwhelming majority of 48-2 passed Senate Bill 526 (Printer's #1556) and the bill was referred a week later to the House Judiciary Committee.

This legislation in its existing language would seriously affect the Fish Commission (and the Game Commission) if five or more members of the General Assembly should be dissatisfied with seasons, creel limits, or any other rule or regulation promulgated by the Fish Commission as the issue would then be presented to the General Assembly for consideration by both Houses. Although we have assurances from a number of legislators that they are not specifically aiming this at the Fish Commission, it appears that a number of legislators are highly dissatisfied with some of the regulations that have come out of other agencies — and this is their reaction.

It is our position, and we have made this known to the General Assembly and the Governor's Office, that passage of this legislation as presented could put the Commonwealth's fisheries management back 100 years. Historically, we have been charged with the management and protection of the Commonwealth's fisheries since 1866. And, more recently, with the protective jurisdiction over all fish, amphibians, reptiles and aquatic organisms. This we believe we have done with an intelligent combination of propagation, protection and management in the best interests of the resources themselves and, to a great degree, through the coordination with sportsmen and other citizens of Pennsylvania to provide the best varied fishing experiences for as many different groups of users as possible.

Also, since 1931 we have enforced the *Motorboat Laws*, and in consonance with the Federal Safe Boating Act, we have promulgated such regulations as are necessary to comply with the Federal Act, as well as Act 400.

I think that in this day and age most people understand the timetables necessary for evaluating populations, hatchery production schedules, and the logistics of distribution of hatchery fish. More and more lead time is required to publish seasons, creel limits (and, in the case of the many specially regulated areas throughout the Commonwealth, to conduct our biological surveys, analyze and evaluate these), and have them acted upon by members of the Commission. Printing deadlines alone for licenses and summaries of the law and regulations have forced us to have these in final form no later than four months prior to the beginning of the new year.

We believe that our fisheries management program is the envy of every other state in the United States, and in recent years the sales of licenses across the Commonwealth have increased to record numbers each year, indicating that the goals of the Commission in providing the finest fishing and boating possible are being reached and have pleased more and more citizens of the Commonwealth each year. Also, we have to believe that the organized sportsmen in Pennsylvania who have heretofore fiercely defended the independent status of both the Fish Commission and the Game Commission would take strong issue with interference by the General Assembly over responsibilities that belong to the professionals.

While we do not question the wisdom of the General Assembly, nor their concern for problems that can be created by overzealous regulations, it is possible that the ramifications of this bill as it affects the Fish Commission and the Game Commission have not been completely understood. In effect, we don't want to be in the barn when it is burned down to catch some other occupants who are deemed undesirable. The net result could soon be a state of chaos as agencies would sit around waiting for permission to carry out their daily routines.

Section 201 of the *Administrative Code* presently provides adequate safeguards by causing all new regulations to be published in the *Pennsylvania Bulletin* for public comments before implementation.

Should it be found that the work of the professionals is in error, or causing problems which should be remedied, there are certainly other avenues open to the General Assembly to see that the problems are corrected. We have technical and professional experts who are knowledgeable in their fields and we certainly must take into consideration the social aspects of a number of our programs and regulations.

We hope that the Pennsylvania Fish Commission will be exempted from the provisions of this proposed Act in the best interests of fisheries management and the boat safety law enforcement, and, most of all — in the best interests of the resources themselves.

Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

Published Monthly by the
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Volume 45 - No. 4

April, 1976

CONTENTS

Hey Dad! by Bud Erich	8
How To Clean A Trout by Gerald A. Almy	10
In Defense Of Opening Day by Bob Gooch	12
Downingtown Fishing Rodeo by George E. Dolnack, Jr.	14
Amateur Entomology by Tom Watson	19
Early Season Canoeing by Alan MacKay	28

Front Cover: Getting away from the crowds doesn't always demand that the angler hike back into a wilderness hideaway for some native brook trout fishing. Many fine tributary streams can be found right along main highways and provide "native" fishing for the angler.

Photo by Tom Fegely

Back Cover: As the weather warms, and it will do so at least a couple of weeks earlier along Pennsylvania's southern tier, the small-fry will begin to join the ranks of anglers along the state's waterways.

Photo by Susan Pajak

MONTHLY COLUMNS

FISHING OUTLOOK	2	ANGLER'S NOTEBOOK	23
LEAKY BOOTS	4	STREAM NOTES	24
TAKING A CLOSER LOOK	6	FLY TYING	26
CO-OP NEWS	22	ASHORE & AFLOAT	30

James F. Yoder, Editor

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The Lake Marburg Marina boasts 440 boat slips and a boat rental concession as well. Ample parking is provided.

fishing outlook

by george e. dolnack, jr.

Traditionally, April is the month of the trout. It's that time of year when anglers dust off their tackle prior to hitting the outdoor trail once again. They, like the fish, are starting to stir after a winter of relative inactivity. And while the majority of fishermen head for their favorite holes, a handful of others pass up the early season trout fishing in favor of panfishing that is starting to pick up in many of our lakes.

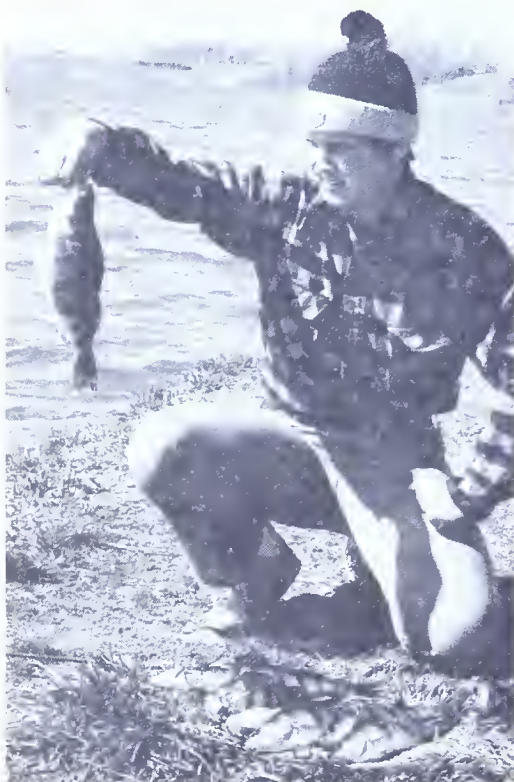
One body of water that has developed into just about the hottest spot around is York County's Lake Marburg, located in Codorus State Park three miles east of Hanover on Route 216.

York County District Waterways

Patrolman William Hartle says that 1,275-acre Marburg has nearly every species of fish in the state. He said that it's not uncommon to see stringers of 10- to 15-inch crappies in the early part of the year and that the best place to find this soft-mouthed delicacy is around the bridges. A small white shad dart, fished six or seven feet under a bobber and retrieved slowly, is a real crappie killer. When the bobber goes under, set the hook firmly and you're on your way to some mighty fine eating.

Bluegills up to 11-inches long are also in great abundance. The bridge areas and many coves are productive spots for these fish. Dressing a shad dart, or similar type lure, with a meal

Author's son, left, admires a husky perch while Dad, right, takes last look at 26" northern before releasing.



worm sometimes helps. Still-fish from a bobber and adjust for depth. If the fish are slow biting, try a slow sporadic retrieve to tempt them. Later on, after the water warms, try small dry flies in the shallows.

Marburg is also becoming famous for its big yellow perch and Hartle said that he has measured jumbos up to 17-inches long. Fishing the coves, bridge, islands and dam areas turn up some real fat fish. Instead of still-fishing a conventional high-low bottom arrangement, try a slip sinker rig.

Attach a #6 hook to one end of an 8-inch leader and secure a barrel swivel to the other end. Thread an egg (or tunnel base) sinker onto the line coming from the reel and then secure the line to the free end of the barrel swivel. Bait with a lively night crawler, cast it out and let it sit on the bottom. The perch can pick up the bait without feeling any resistance since the line is pulled through the sinker that is resting on the bottom. When the slack goes out of your line, set the hook.

If you'd like to try a different perch recipe, you might want to try "fresh water shrimp." Here's how its made.

Fillet the perch, cut each side into three or four strips and then halve each strip. Salt some water, place on stove and while it's coming to a boil, prepare another container with water and ice. Drop the perch into the boil-

ing salt water. After the strips curl, remove and drop them into the ice water to firm them. Chill the "shrimp" and serve with the sauce of your choice.

Catfish and bullheads 14- to 18-inches long take the usual baits fished on the bottom. Top spot for catfish, says Hartle, is the Long Run section off Route 216, also known as the "Marburg Flats."

Trout are also available in Lake Marburg. Several years ago, 40,000 brown trout and 65,000 rainbow trout fingerlings were stocked here on an experimental basis. Last year, these fish measured 13-inches and one hit seventeen. An additional 13,700 legal-sized rainbows were stocked last year at the end of May. For trout, Hartle recommends the deep water area near the dam.

On May 1, Lake Marburg will offer some fine fishing for walleye, musky and northern pike.

The elusive walleye ranges up to 27-inches here and Hartle advises drift fishing a minnow on the bottom near the dam and around the islands.

Northern pike, in the 40-inch class, have also been caught and regular muskies over 47-inches long have provided fishermen with the ultimate thrill. This year, the tiger muskies should be of legal size. Trolling off the main marina docks with minnow-type

lure and spoons has been productive as has bobber fishing large minnows or suckers in the bridge areas.

On June 12, both species of bass will be bowing the rods of anglers on Marburg. Bass over 20-inches long have been taken and good places to try for them are along the shoreline, the Marburg Flats, and shallows in the dam area.

In summarizing the fishing at Lake Marburg, Hartle says that anglers have the best success around the bridges and in the back coves during the spring, early summer and fall. He said that there is nothing unique about catching fish here and added that all methods, baits and lures that take fish at other lakes also work at Marburg.

Facilities at Lake Marburg include boat launching ramps off Black Rock Road, off Route 216, and off Jefferson Road. Marburg also boasts: a 440-boat slip marina, marina concession-boat rental, wading-swimming pool complex, picnic areas, camping, bridge trails, hiking trails and sailboat launching-storage area.

In addition, fishermen parking lots can be found all around the lake and gasoline engines up to 10 horsepower are permitted.

For more information on Lake Marburg, contact: *Park Superintendent*, CODORUS STATE PARK, R.D.#3, HANOVER, PA. 17331.

The bridge areas at Lake Marburg are hotspots for all panfish, and are good for northerns and muskies as well.





PINUP GIRL?

Would it be possible to get a larger picture of the girl fishing on the front cover of the May 1975 Angler? I would like to have one for my den. I know you could sell a lot of these pictures if you had them. Thank you.

C. B. YINGLING
Cresson

Possible? We don't know, C.B.; all you've got to do is get past her husband! But then, who are we to say? Why not contact the man who took the picture? He's our "Taking A Closer Look" columnist, Tom Fegely. His address: 838 West Station Avenue, Coopersburg, Pa. 18036.

NOT AVAILABLE!

Looking at my Pennsylvania Angler for January 1976 I was sure I saw a radio, TV and sportsman (horse) on the front page. I said to my wife, "Does this look like Arthur Godfrey?" She said it does.

I made a button for fishing in 1976 by taking the one in the January Angler and putting it on one of my buttons. Would it be possible to get one for on my pickup like on your trucks? Thank you.

H. O. ZIMMERMAN
Steelton

Come to think of it, Nick Kuzo does resemble Arthur Godfrey. About those decals: we don't even have enough to satisfy our own needs! So, none are available for public distribution. Ed.

WHAT TO FEED THEM?

My present Pennsylvania Angler expires in May 1976. I am retired and will be busy fishing for walleyes in May and I don't want to miss the Angler so I am mailing a check for \$7.50 for a three-year subscription.

To the editor: I would like you to tell me (or find out) what I could feed Lake Erie

shiners — what kind of food and where I could buy it? I fish Lake Erie a lot and on my way to the lake I buy 5 or 6 dozen shiners. When I get to the lake, if I find that it is too rough and I cannot get on, instead of getting rid of the minnows I would like to keep and feed them until my next trip to the lake. Thanks a lot if you can help me.

JOHN KASULA
Brookfield, Ohio

Actually, John, feeding the shiners is the last thing you need worry about. They will live a long time without food. What is more important is that they be kept in well aerated water which is maintained at a relatively constant temperature — preferably quite cool. Once you've solved the problem of supplying your leftover shiners with oxygen and a comfortable temperature, I would suppose that just about any of the many fish foods sold in "pet shops" would be satisfactory.

One word of caution: In Pennsylvania, you may buy as many shiners as you can afford. However, the sales slip you receive with them is valid for only 15 days. Therefore, should you have the good fortune of keeping "5 or 6 dozen" shiners alive and return to Pennsylvania more than fifteen days later, you could find yourself in big trouble! How come? You would be exceeding the possession limit for baitfish by all those over 50. So, either get back before the 15-day limit; or, just bring 50 of the baitfish along and all is well! Ed.

HOW TRUE!

With my renewal I would like to commend you on a fine job you do with the Angler. I was looking through an Angler of 1934 about a month ago and read an article on water pollution. How true the slogan is: "We are the solution of water pollution."

I would like to make one suggestion — why not put Lively's Fly Tying sheets on the centerfold, then it would be easy to lift out and punch for your scrapbook that way they would be stronger, and I do look forward to his writings each month. To me, he does a fine job. Just a suggestion if it doesn't listen good, scrap it. (sic.)

Excuse bum writing and misspelling.

BLAINE LITTLE
Marion Center

Everyone, Blaine, believes that Chauncy Lively does a fine job. And, like you, most everyone has a better idea where we might put his column in the book. Why not the centerfold? Well, we like to reserve that for photo spreads when they're available. Ed.

"NOT SO HEP"—

I don't know if many people have my problem but I thought I'd write and see if you thought some articles could be written on the basic subject.

Since my dad was not a fisherman, I have had to learn what I could from books and magazines. The Angler has been a very great help but all too often assumes we know the basics.

I have read many articles on how to catch fish and fillet fish; but, what about scaling fish? When was the last time an article appeared on how to and when to scale them. Do you "scale" trout? If you are going to fillet a fish such as walleye, do you scale it first or cut scales and skin off together?

Also, how do you skin a fish? I know this is what you're supposed to do to catfish but how? And what other kind of fish do you skin?

How about it, Jim, an article on above basics for we "not-so-hep" fishermen?

Thanks.

ED HOLLOWAY
Sharon

Many of us in this field often admit (privately, of course!) that sometimes, perhaps we are "writing to ourselves" — in short, the very thing you speak of — we assume that everyone knows the basics! Doc Chamberlain, up in Clarion County, says that to "ASSUME" something is the best way to make an "ASS" out of "U" and "ME"!

When I was a youngster we scaled most all fish except catfish and bass; the former had to be skinned, we opted to skin the latter because we felt that doing so removed the "muddy" taste from our Spring Lake, Bradford County, bass. I still believe the latter theory valid (though I haven't fished Spring Lake for years!). However, since I was introduced to filleting, I fillet (and skin, naturally) everything but small trout (and since I don't catch any small trout . . . !).

I don't know whether you missed the issue wherein we printed the "How-to-do-it" piece regarding filleting fish, but, although that dealt with panfish, the filleting and skinning procedure described therein is basically the same for all fish. Size naturally varies, but the fillet of meat is removed from the skeletal structure of the fish and then the knife is run between the skin and the fillet of pure meat. This should answer your question regarding the scaling of walleyes — if you were to fillet them there would be no need to scale them.

Earlier, I mentioned "everything but small trout . . ." Truthfully, I do remember catching one or two small ones. And, whether necessary or not, I could not eat them without first running a knife over the fish's side at a bit less than a 90° angle under running water. The very tiny scales

were thus washed away, thereby satisfying my squeamish stomach which will have nothing to do with fish scales! Doubtless many anglers ignore the scales. (See Gerald Almy's "How to Clean a Trout" on page 10 for the basics.)

At one time I entertained the idea that perch, caught through the ice only, tasted better when scaled, and not skinned. Perch caught any other time were filleted and consequently skinned. So, if you ever get some sort of wild notion like that and insist on scaling your fish, believe me, you'll get over it! Scaling is best accomplished by holding a knife at a bit less than a 90° angle and scraping forward, toward the fish's head, starting at its tail. This removes the scales, sending a good many of them flying in all directions, not excluding: into your hair, onto your glasses and various and sundry places about the little woman's kitchen (to which they'll attach themselves with an adhesiveness unrivalled by epoxy!). If scale you must, do it outdoors! And, don't allow the scales to dry before scaling — that shouldn't happen to any angler!

With regard to skinning catfish, you'll undoubtedly find no less than ten "Best Ways to Skin Catfish" pouring into our Leaky Boots column in no time at all. If not, we'll prevail upon the expertise of Farley Stronsett, a local fishmonger who has skinned more catfish (and customers!) than any man alive! Ed.



NEWS ON STRIPED BASS!!

Enclosed is a photo of a STRIPED BASS caught in the Shenango River about 100 yards below the Pymatuning Dam. It measured 24 inches, weighed 6 pounds 2 ounces, and was caught September 14, 1975 on a minnow.

I talked with the people from the Linesville Fish Cultural Station in Crawford County. They say that there is (up to now) no recorded size for inland

STRIPED BASS and were quite surprised at the catch. Frankly, not quite surprised as I. It seems the fish was one of the stocked experimentals that has grown from six inches and traveled the approximately 15-mile trip. I hope that this is some proof that the STRIPED BASS are catching on. It should provide much good fighting bass fishing for Pennsylvania Anglers.

About two hours later, on the same day, my son caught a 36½-inch Northern Pike which weighed 14 pounds 4 ounces. He caught it on a large shiner and both the Striper and the Northern were caught on 8-pound-test line with size 8 hooks.

Enclosed is a hand-written application for either a Senior Citation or Pennsylvania State Record Fish (for the Striper). We would appreciate if you could put this STRIPED BASS photo in the *Pennsylvania Angler*. We would like to share our luck and help show that there is plenty of great fishing in Pennsylvania.

ROBERT KASTEN
Pittsburgh

The Striped Bass is a relatively new member of Pennsylvania's fishery and occurs in but a few places. For this reason, no citation award has been established as yet. However, now that we've seen your catch, it's conceivable that more will begin to show up in our reports from the field. It is therefore reasonable to assume that we will be obliged to create a Striped Bass category within our citation program. Of course, that is all dependent upon whether or not the Striped Bass succeed in very great numbers. Ed.

HOLD ON THERE!

I read the letter you sent to my father concerning his STRIPED BASS catch. First, I was curious about the lack of a record or citation for STRIPED BASS. Since it was deemed necessary to put both a size limit and a daily limit on this species, it would seem to follow that a record and citation would be established. It has to start somewhere!

I realize the species is relatively new to Pennsylvania, but it *is catching on*. Both my father and I spend two to three days a week fishing all around Pennsylvania and have seen many of these fish caught. Most of these fish are 12- or 13-inches long and primarily in the east — namely the Susquehanna River. A great many fishermen mistake them for White Bass or a discolored smallmouth.

ROBERT KASTEN, JR.
Pittsburgh

With regard to your recent letter, when you understand all the facts, it may not be

surprising at all that a citation size was not established along with a daily limit and minimum size.

To use the term "relatively new" when referring to the Striped Bass is an understatement — it is absolutely brand new! Secondly, the daily limit might someday prove to be too strict; or, too liberal — we don't know. Similarly, the minimum size might someday prove to be too generous; or, too restrictive. It's simply a matter of not knowing what to expect from Striped Bass landlocked in Pennsylvania. To use biological data gathered from other states would have no bearing on their suitability (should I say, "adaptability"?) to Pennsylvania waters. Although we have great hopes for them and trust that they will add a new dimension to Pennsylvania fishing, we don't really know what to expect from them and won't know for a number of years. We do know that we can hardly expect them to reach the sizes that they do in their normal saltwater habitat.

So, setting a size limit and a creel limit was easy — compared to setting a citation limit (minimum). I would suggest that you continue to enjoy the Striper fishing and keep in touch with us regarding your catches. It is only in this manner that we here, and those folks in our Fisheries Management Section will come to a better understanding of what we can look forward to in the Striped Bass program.

Your reference to 12- & 13-inch Stripers being caught in the Susquehanna River was at first looked upon with a bit of skepticism. However, we have since learned that Stripers of that length were found in the Juniata River, below the Raystown Dam — the result of a drawdown — so it is not so surprising, after all, to hear your report. We would hope that all of our readers would alert us to catches of Stripers from the Susquehanna River. Ed.

NEW CLIENT!

I am interested in becoming a subscriber to your magazine, *Pennsylvania Angler*.

Read my first copy (May '74). The only question I have is the subscription price. Has the rate gone up since May '74? Either way, I am very much interested in becoming a subscriber. You can either start my subscription (1 year) and bill me; or, send me the current rates so I can become a subscriber.

JOHN W. KESSLER
Haddon Heights, N.J.

Your letter is music to our ears, John. For the benefit for others as well, here's the score: price has gone up — it's now \$3.00 per year. And, we cannot "bill you." Check or Money Order must accompany your order. Ed.



Taking A Closer Look

by Tom Fegely

SPRING TRAINING

A spring boils up at the far edge of the woods, turning sand in its icy bottom and freeing periodic bubbles into the chilled April air. As a boy I'd come here often; sometimes to search for crimson salamanders hiding among the moss-clad rocks and other times to sit and watch the incessant flow percolate upward, churning amber sand like a pot of stovetop oatmeal. It is here that many memories take root. And it is the place to which my young sons and I come regularly.

In April the spring's overflow joins forces with a melting "onion snow" to soak the edge of the woods. Armies of skunk cabbages have gained a foothold in the black muck, exposing their ruddy spathes well into the rim of the pasture. Able to keep their feet wet throughout the year, saturated roots guarantee the skunk cabbage the honor of being the first — also the most putrid — of spring's wildflower display. In another few weeks the marsh marigold, trout lily, and cowslip, too, will send forth their blossoms and fragrances along the brooklet's course.

There are other privileges afforded the woods by the presence of the spring. Wherever a fallen oak or natural turn slows the water's progress, it lingers long enough to gather silt and fallen leaves. Here the peepers and green frogs come to mate and lay eggs, having spent the frozen months close by beneath the insulation of a grassy bank or in the basement of a moss-covered stump.

Where the flow gathers momentum, sand and humus are washed away to

expose fragments of jasper and quartz. A boyhood thought flashes back as I pluck a fractured arrowhead from the stream floor and hand it to my youngest son. I watch their eyes brighten as I tell of the Delaware Indians that once ruled the land. They, too, picture a loin-clothed brave kneeling nearby, sampling the sweet waters flowing from the hillside spring.

At the tip of the woods the waters gather against a fallen oak, forming a serene leaf-carpeted pool. In another few weeks it will be alive with tiny black tadpoles — an open invitation for other creatures to come and feed. By summer, the larvae — whether frog or salamander — will move from the stream to the woodland floor to encounter a new environment and a new life.

As if to make up for time lost, the pool water once again gathers its wits and races headlong into a three-foot fall. Here it begins to utter new sounds. Joined by the seepage of April's legendary rains the flow garners strength, here and there gnaw-

ing its own bank, creating secret hideaways where wood turtles and muskrats spend the winter, and where the brook's first trout finds refuge and sustenance. It is indeed landlocked, having been washed in by an earlier flood but, without competition, able to survive on minnows and water-borne insects. In passing we wish it well, in hopes of meeting again on another day.

Now mid-way to its terminus, the once shy waters tumble over caddis-infested rocks until the banks part company and spill their contents across a dozen different rivulets. Now the soil once more drinks its fill, permitting the excess unhindered passage through the swampland. Up above, the buds bleed red, and blackbirds display their crimson epaulets to the sun. A newly wakened turtle skitters through a sea of cinnamon fern fiddleheads as my sons give chase. But the race is short-lived and we laugh aloud as I rescue them and their boots from being sucked in by the soft mud.

We leave the swamp in escort of the

mainstream, which has again gathered its flow for one final rally before entering the creek and losing its identity — forever.

Where the headwaters finally end, a huge boulder eases the jointure. Slowed by this giant rock, the parent waters part company and in so doing create a quiet eddy. It was here, in the springtime of my own life, that a brook trout took my first offerings. Those that I kept were soon replaced by others, for the calm was never without a resident. Those I returned soon slipped back to their haven behind the rock.

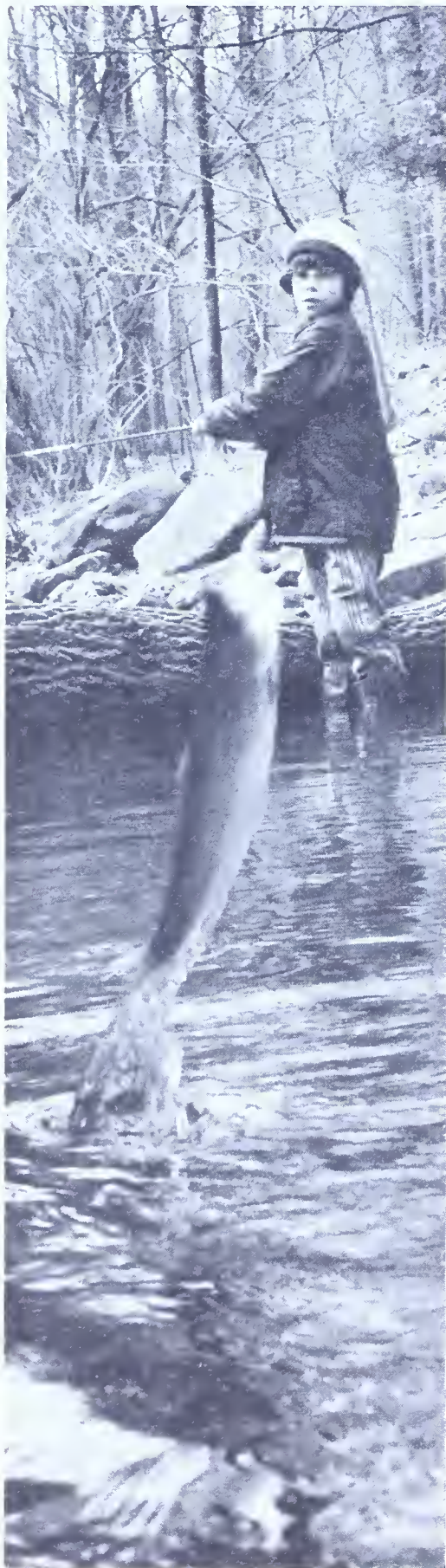
It is at this spot that my sons, too, will land a trout. But, like today, they may be late for the opening hour. For they will pause to hear a redwing, or catch a frog, or watch a sunrise. And though their creels may be light at day's end, their minds will be heavy with the very knowledge that a man's wealth can be measured in many different ways; not the least of these being a trip to a favored trout pool by way of the spring and the swamp.



Appearing a bit later across the northern tier than in the southern part of the state, these three harbingers of spring: skunk cabbage, spring peepers, and marsh marigolds are easily spotted.



Hey Dad!



by Bud Erich

I was still trolling . . . somewhere deep in dreamland when a far off voice trying desperately to reach me called, "Hey Dad!"

I pulled myself out of that murky slumber called sleep and somehow managed to mumble a barely recognizable, "What?"

"Don't you remember, Dad?" asked Dean, "today we're going fishing!"

Dean is my eight-year-old son who you have to pull out of bed and help balance on his feet for about 15 minutes before he wakes up on a school day. But when it comes to a day of fishing — well, I think you've got the idea.

A cup of hot coffee helped clear my head to the point where I could appreciate Dean's enthusiasm. On the first day of the trout season I had a previous commitment, therefore, his first trip was short and fishless. No wonder he was raring to go.

It was still dark as we pulled out of the driveway. And the day held a threat of being miserable, cloudy with cold rain and possibly snow!! But that didn't bother Dean, to him, *this was the first day!*

The first part of our 25-mile trip was silent. Dean's body was twitching with excitement and I wanted that congealed smile on his face to just stay there. When the silence would finely be broken, Dean would have to do it.

I could only imagine the thoughts going through his mind and finely one of them popped to the surface.

"Hey Dad."

"Yes, Dean," I answered.

"Where are we going fishing?"

"Mix Run."

"Good! I like Mix Run," he said.

Of course, today, he would have liked any stream — all he was concerned about was going fishing. Mix Run is like any other stream, it has its "on days" and its "off days" as far as fishing is concerned. I had only one logical reason for choosing this stream: It is, to a certain degree, more isolated than most other streams in



Dean took on the chore of cleaning his own fish, but not without a little help from the older generation! A snack of hot chocolate and cookies can be best enjoyed while surveying one's catch!



our area and I wanted this trip to be a real father and son experience without too many interruptions.

As we opened the car doors the chilly weather took a deep bite. But that didn't bother Dean, he was interested only in the water . . . water that held fish.

His mom knew him well, for she had dressed him in two pairs of pants! One pair was tucked into, the other (a pair of flairs) hung out over his shin-high, gum boots! Dean made use of that combination by walking in the water as far as he dared to stare into a deep green pool that, in his mind, must have held at least a million trout.

My rush to get his rod hooked up wasn't fast enough, for his impatience outran everything and he asked excitedly, "Hey Dad, is my rod ready?" I was in the process of attaching the last of many sinkers needed to get the bait down deep, when a pair of small anxious hands were already reaching for the rod and a small, but confident, voice assured me he would have no trouble attaching the bait.

The tassel on his red, white and blue hat shifted with the cold breeze as Dean made his way to the stream with high hopes. I hardly had a chance to remove my rod from the station wagon, when I heard him yell, "Hey Dad!"

His rod had a favorable bend and his line knifed the surface of the pool as Dean applied pressure. So much pressure that it forced the trout to break water. I tried to control his youthful enthusiasm, but with his rod held low he reared back again, causing the trout to jump clear out of the water.

I finely talked him into keeping his rod tip up and applying just enough pressure to keep the line taut as he worked his fish to shore. After Dean landed his 10½-inch brown trout, with a little coaching from the older generation, he took on the chore of cleaning his own fish.

In the next three hours we couldn't beg a bite as we walked a considerable distance upstream. Most of the time we fished; but, sometimes we just sat and talked about fishing and everything around us.

During the course of the morning the view of the sky had changed many times. From clouds to sunlight, to dark heavy clouds . . . and the chill lingered on. As the cloudiness increased and the winds picked up I told Dean that we better head for the car or we were going to get wet.

He looked down at the canvas creel which protected his only trout, patted it once with his hand, smiled and said, "Who cares?"

By the time we reached the car the weather had brightened up somewhat, so we sat down and enjoyed some hot chocolate and cookies that Mom had so thoughtfully laid on the front seat. But, of course, this was with the understanding that Dean could lay out his fish where he could look at it while munching on a cookie.

The drive home also tickled Dean's inquisitive nature. As we passed a sign protruding out among the rhododendron and moss-covered rocks, he asked, "Hey Dad, what did that sign say?"

"Spring," I answered.

"Is that Spring Run?" he asked seriously.

"No," I mused, "it is a place where you can . . . well, wait a minute, I'll stop and go back so you can get a drink."

The water must have really tasted good, for I think Dean drank up half of the mountain before getting back in the car. We drove only a short distance when that familiar phrase rang out, "Hey Dad!"

"What is it?" I asked, smiling a little.

"We'll have to fish Spring Run sometime, won't we?" he beamed while still holding his only trout.

"We sure will, little buddy, we sure will!"

STEP-BY-STEP . . .

How to Clean a Trout

by Gerald A. Almy

With the increasing emphasis on returning trout alive and unharmed to the stream, it's important that fish which are killed *do not go to waste*. Trout are quite easy to clean on the stream immediately after being caught. And this is exactly when they should be dressed to ensure fresh, tasty table fare.

Being a cold water species, trout deteriorate quickly in the warm weather typical of most angling months. There are two main sources of deterioration. One is bacterial growth which first attacks the fish's internal organs before spreading to the flesh. The second is digestive enzymes in the fish which continue to act after the fish dies. Removing the entrails promptly after a fish is caught eliminates both major causes of unappetizing trout.

The procedure for cleaning a trout is simple and quick. It takes barely 30 seconds of fishing time to completely field dress a trout, once the steps are learned.

After the fish is cleaned it may be wiped with a damp paper towel before being placed in the creel. Fish should not be submersed in water or wiped with a saturated towel. This softens the flesh and removes much of the trout's flavor.

Either canvas or wicker creels will keep trout fresh for several hours if temperatures do not go above 80 degrees. Canvas creels should be periodically dunked in water to facilitate the evaporation process which keeps the fish cool inside. Wicker creels are best lined with wet leaves or ferns.



1. Insert the point of the knife into the anal opening . . .



2. Slit up the center of the trout's belly in a straight line. There is no need to cut deeply. Just through the skin is enough . . .



6. Hold the lower jaw of the trout in one hand and grasp the V-shaped tab you just freed with the other hand. Pull down on this piece . . .



7. Entire gill structure and entrails will come out with one steady pull . . .



3. Cut up to the gills. Stop before you get to the V-shaped point below the fish's jaws . . .



4. Insert a finger inside the fish's mouth and press down on the tongue to extend the V-shaped tab on the bottom side of the fish's lower jaw. This tab is thick in the middle and thin on each side. Stick the knife through the thin part, from one side through the other . . .



5. Slice through and forward, freeing this V-shaped tab . . .



8. To remove remaining blood sac, hold trout in one hand and run thumb nail of other hand up the length of the backbone . . .



9. Wipe fish with damp paper towel or clean leaves . . .



10. Cleaned trout, ready for the pan or the creel!



This Cooks Creek angler used a fly rod and salmon eggs to bring a good trout to the net.

In Defense of Opening Day

by Bob Gooch

The seconds dragged like hours . . . the crowd was building rapidly now. Late arrivals shot furtive glances up and down the long line of boot-clad men, and somehow managed to squeeze into the already tight ranks. The more prudent, those who had arrived early, displayed characteristic patience, shuffling to make room for the tardy ones.

I glanced at my watch. Two more minutes! My eyes once again swept the rushing water at my feet, and the flash of a fish told me I was in a good spot.

I fidgeted impatiently when an angler downstream who was seemingly unable to wait longer, tossed his

worm-clad hook into the April water. *That did it!* Almost as one, dozens of fishermen up and down the stream followed suit.

Again I glanced at my watch — the second hand just swept past eight.

It was opening time on Pennsylvania's Cooks Creek and the 1975 trout fishing season was underway!

I flipped the bail on my ultralight spinning reel and joined the crowd. I shot my egg-draped hook upstream, as far as I could without disturbing the angler immediately above me. The pinch of lead took it deep and now my lure was rolling along the bottom — but not for long. A quick strike jolted my reel hand even as the flash of a fish

told me I had a customer. My own strike was spontaneous. I was engaged in battle with my first trout of the young new season!

Fighting room was precious, but the slender stick did its job, telegraphing every move of the lunging fish.

Soon a good 12-inch rainbow was at my feet, its silvery sides heaving from exhaustion. I scooped it into my net and paused to admire its beauty. Even tank-reared rainbows fascinate me!

"Nice catch!" A fellow angler shared my moment.

With two fish in his creel, he took time to chat. One of the secrets to opening day pleasure is learning to relax, to cast off the air of urgency

that seems to grip so many anglers.

As a writer devoting full time to outdoor journalism I read, listen to, and get involved in, thousands of arguments for and against "Put-and-Take" trout programs and the merits of *Closed Seasons* and *Opening Days* as opposed to year-round trouting as practiced in West Virginia and a few other trout states.

Both the proponents and opponents have their points, but I stand with those who favor "Put-and-Take" trout fishing and closed seasons.

Sure, *I prefer fishing for native trout* — those spawned and reared in some remote headwaters stream — fish that spook at the shadow of a careless angler and turn up their noses at pellet food, cheese baits and artificial eggs. And I've chased native brookies from the unspoiled ponds of Newfoundland to the sparkling streams that form in the shrouded peaks of the southern Appalachians. I've taken native rainbows from wild West Divide Creek, in the Colorado high country, and from the picturesque Lemhi River in Idaho. Such fishing is rarely a week-to-week opportunity, however, so like millions of other anglers in the crowded East, I must turn to the stocked streams for much of my trout fishing.

I am not about to complain.

Put-and-take fishing is the trout fishing of the future in much of America, and the only kind of trout fishing thousands of anglers will ever know. I refuse to join those who would deprive them of this opportunity!

Fishing for stocked trout is not demeaning. The fish are vulnerable for the first few hours of opening day, but they learn fast.

Some fishery men place the opening day take at upwards of 70% of the released fish. This will vary according to water and weather conditions; but, in any event, those that survive the initial onslaught can provide challenging, rewarding fishing. Many are "hook-stung," or the survivors of rousing battles on the end of an angler's line, and the hordes of anglers lining the banks and sloshing through the water have made them wary, spooky and wise.

Opening day itself is more fun than challenging.

The early April air is usually crisp and nippy. The water is icy and the streams are flowing full and strong. It

is a great time to be outdoors. Most anglers catch fish, though the majority do not fill their limits. Spirits are high and the jolly fellowship along an April trout stream is contagious. Tangled lines and lost fish are more likely to bring laughter and good-natured kidding than flares of temper.

The relatively easy fishing of opening day on a put-and-take stream is nearly ideal for introducing a young aspiring angler to the joys of trouting. Above all a youngster needs to catch fish on his first outing. This can be the bug that bites, giving him a disease for which there is no permanent cure. Dry flies, streamers, nymphs, tapered lines and matched tackle can come later. For the present, at least, the emphasis must be upon catching fish; and, opening day on a well-stocked trout stream is the place to accomplish this.

Put-and-take trout are usually healthy fish. Reared in hatchery tanks under ideal conditions and well fed, they are full-bodied and strong. Given time to acclimate they are full of fight and vigor, and the fierce competition for the limited food in most eastern streams develops their speed and alertness. Closed seasons favor this.

The rainbow, the bread and butter trout of the stocked streams, jumps well and is often just as flashy as its wild kin as it cracks the cold surface. Unfortunately, too many anglers, in their haste to land their fish, do not give the fish the freedom to run and leap. In so doing they miss one of the true joys of trout fishing, one possible a thousand times on opening day.

Possibly my taste buds are not as delicate as those of some trout gourmets, but I notice little difference between the firm flesh of a healthy stocked rainbow taken from the icy waters of an April stream and the wild variety that fin the rushing waters of the western Rockies. Both are tasty — if properly cared for and prepared.

While most anglers go with bait — worms, salmon eggs, corn, minnows or cheese — on opening day, artificial lures can be just as effective and sometimes more so.

On opening day several years ago I dropped downstream, well below the crowd, and started working my way upstream casting tiny spinning lures. On the first cast a rainbow flashed from behind a small boulder and socked my lure.

I continued slowly upstream, work-

ing the likely water and taking fish often enough to keep it interesting. Many came from holes lined with bait fishermen. As I filled my limit with a fat brookie from an overworked hole far upstream, most of the crowd had disappeared and I had the stream almost to myself.

As the sun sinks toward the west and long shadows creep over opening day streams the sun loses its warmth and the temperatures drop noticeably. Most anglers have long since called it a day. The angler who stays with it may have the late fishing to himself.

Because of the crowds and limited room for a backcast I seldom use fly tackle on opening day, preferring spinning tackle for both bait and artificials. Ultralight spinning tackle is a joy to fish with, exacting the best from the 9- to 12-inch fish that fin most stocked waters.

Opening day with all its din and clamor, hilarious crowds, and frantic scrambling to meet opening time is fair to all — much more so than a continuous open season and staggered stocking programs that favor those who live near the stream.

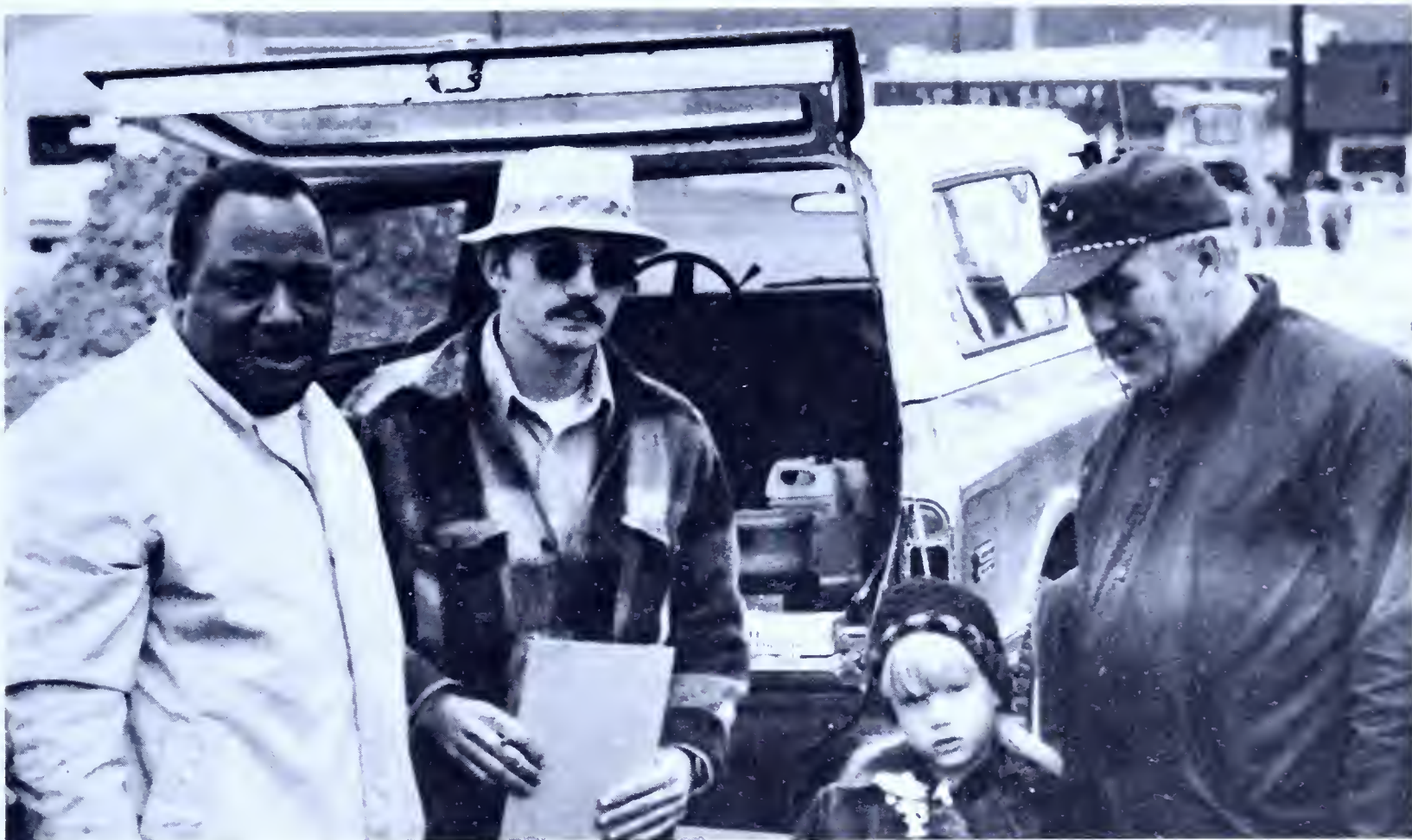
While opening day trout might be pale by comparison, they color quickly under natural stream conditions, eventually matching the deep, rich color of the wild fish. This is particularly true of browns and rainbows. Hatchery brookies seldom achieve the rich, vivid colors for which the natives are noted.

The dream of a fish-rich picturesque stream winding and singing through a green meadow is one most anglers never realize, but the modern put-and-take trout stream can approach fulfillment. It sparks an interest in trout fishing that would otherwise die of starvation. I favor a practice that keeps trouting a viable part of the American outdoor scene.

Few traditions can rival the approach of opening day, the busy preparation, the collection and repair of tackle, boots and clothing, the purchase of licenses, the marking off of the calendar, the idle talk, the fidgeting and anticipation, and an occasional visit to a stream for a glimpse of the freshly stocked fish.

Opening day in trout country is *Americana* that persists in the face of the current collapse of traditions. Put-and-take trout provide it with the strength.





Earl Proctor, left, Downingtown Juvenile Detective, is the man responsible for putting together the town's Annual Fishing Rodeo. Shown with Earl are Patrolman Ken Dunn and Mayor Ev Gill.

Downingtown Fishing Rodeo

by George E. Dolnack, Jr.

Admittedly the scene at left isn't the typical wilderness setting that typifies much of our Keystone State spring fishing, but we dare you to tell any of those folks along that shore they're not having fun! We can't all have the good fortune to live alongside or very near to some pristine trout stream so why not make the best of what you've got? Thanks to Downingtown's Police Athletic League, hundreds of metropolitan-bound youngsters had an enjoyable day of fishing fun!

One of the most popular spring events eagerly looked forward to by Downingtown area youngsters each year is the annual Fishing Rodeo held at the city's First Lake.

Sponsored by the Police Athletic League, the affair came into being four years ago at the suggestion of Earl Proctor, Downingtown Juvenile Detective who puts it all together.

The event, designed to get the youth interested and involved in healthy outdoor recreation, evolved into a cooperative community project spearheaded by the Downingtown Police Department. Participants include local businessmen, individual citizens, the Brandywine Trout Club and the Pennsylvania Fish Commission.

The effort of the group was rewarded by a turnout of some 300 budding anglers who lined the lake last April. They came to catch fish — and catch fish they did!

Although the lake has a good population of trout, panfish, bullheads and bass, the policemen bought 300 trout and several hundred bluegills for the rodeo to make things even more interesting.

The Brandywine Trout Club donated 150 additional trout and also provided personnel to weigh and measure the youngsters' catches. District Waterways Patrolman Ray Bednarchik helped plan the event and he and Deputy Tony DeStefano were on hand to lend an assist.

The rodeo started at 8:00 a.m. and ended at noon. Fishing during this time was limited to youngsters under the age of 16. After, it was open fishing on the lake as usual for all anglers.

Trophies provided by businessmen, sportsmen's clubs and individual citizens were awarded for the longest fish caught in each species and ties were broken by the heaviest fish.

(more photos next two pages.)

Downingtown Fishing Rodeo

The day's fishing success is evident in the catches of Gary Ware, right, whose stringer of trout is being admired by Brian Steely and Jerry Ware. Jebiz Anderson, Jr., of West Chester, below, picked up a fine pair of trout, but Susie Proctor, below right, took home all the marbles with a mixed stringer of crappies, perch and sunfish. That's some catch, Susie!





Who says being Mayor isn't fun? That's Mayor Ev Gill, above, who has the honor of awarding the trophies to the lucky fishermen. Prior to that, Bucky Urbine, of the Brandywine Trout Club had the pleasant chore of weighing the youngsters' catches. The Downingtown Annual Fishing Rodeo might be just what YOUR area needs . . . give it some thought!





Amateur Entomology for the Fly Fisherman

by Tom Watson

"It's too complicated!" "I would rather spend my time fishing than breaking my neck trying to catch a bug!" "I buy my flies from a good company (or professional) that ties flies like the naturals!" "I tie my flies like 'Harry Hackle' says to in his book!"

Fly fishermen and fly tyers find many excuses when they read suggestions made by Art Flick in *Streamside Guide to Naturals and Their Imitations*; or by Doug Swisher and Carl Richard in their, *Selective Trout*; to study the insects in your home streams so your imitations will resemble the naturals.

I had one of these excuses several

years ago, but changed abruptly one day on New York State's Beaverkill when I saw a fellow seining for nymphs. It was the middle of May and time for the March Brown (*Stenonema Vicarium*) hatch. I waded over to him and asked if I could see what he had captured. He showed me several caddis, stone fly, and mayfly nymphs; pointing out the March Brown nymph which he claimed was in great abundance that day. This was good news to me because the March Brown was the nymph imitation on the end of my tippet. As I was examining the natural, I thought how different it looked compared to my imitation. The natural's color was a lighter shade,

while the body was smaller, less bulky and flatter. Its legs and tails were also unlike my imitation. The only way my imitation was like the natural's was in the color of the wingcase, and even there the length was different.

I spent part of the next day studying my March Brown Nymph specimen and trying to tie an imitation as close to it as possible. When I felt I had succeeded at this I headed for the stream. From that day on, my "revision" of the March Brown has at least doubled my fish catch.

The point I am trying to make is that many of the standard imitations we buy from professionals or tie from dressings found in the many fly tying

Nymphs can be collected by lifting rocks and grabbing the rock-clinging nymphs with the fingers.





Mesh attached to two dowels is excellent when you are seeking bottom-dwelling nymphs and insects.

and fly fishing books on the market often don't imitate the insects in our own home streams. Consequently, they aren't very successful. For example, the "standard" imitation of the Quill Gordon dun (*Iron Pleuralis*) calls for a body tied with a stripped quill from the eye of a peacock tail feather which has a barred brown and tan color. Yet the body of the Quill Gordon on the Neversink in New York and the Loyalsock in Pennsylvania has an unbarred, cream-colored body with a touch of olive. The "standard" imitation is excellent for the Schoharie and the few other Catskill streams it was intended for; but, when you fish streams a hundred or two hundred miles from these, the accompanying environmental changes can effect the appearance of a fly. By collecting and observing insects in your home streams, you are able to make, or have made for you, a representative artificial insect which is prevalent in your stream. Most fly fishermen who practice this will tell you that this generally means more fish.

As I stated before, many fishermen feel that amateur entomology is far too complicated and difficult. What is so hard about collecting insects with a small net or seine, putting the specimens in collecting bottles or an aquarium, and tying your imitations from them (or having someone else do it for you)?

The amateur entomologist can be one of two types. The first type is the "collect-in-bottle" type. In his fishing vest is a small bottle or jar containing a preservative. (Small baby-food jars work great because they are leakproof and have a large opening.) Two preservatives I use are rubbing (isopropyl) alcohol and a formula given to me by a biologist which consists of one part glycerine to one part white vinegar to eight parts grain (ethyl) alcohol. The amateur entomologist also has a seine which can be a piece of fiberglass or nylon mesh found in any hardware store. Attached to this mesh can be two dowels, any length and diameter that suits your needs. This type of net is excellent if you are after bottom-dwelling nymphs and insects

because the dowels, when left protruding at the bottom, can be thrust into the stream bed. By disturbing the bottom rocks and gravel in front of the net, the insects will flow into the net. Even without the dowels this netting works great in collecting under-the-surface, as well as, surface insects. It's also very easy to carry, and the price is right.

One company sells a "nymph net" which consists of a piece of netting with short bamboo handles. This has a two-fold purpose in that you can collect insects floating on the surface, or if there is no hatch in progress, bottom-dwelling insects can be captured using the same method used with the dowel net. The advantage of this net over the dowel net is that it is small enough to be carried in your vest. The disadvantage is that it's not much good in deeper water, and unless you are seining in shallow water, your arms are going to get wet and cold.

I find that many nymphs can be collected by simply lifting rocks along edges of riffles and pools and grabbing the rock-clinging nymphs with your

fingers. Then, just drop your specimen in your collecting jar filled with preservative. One thing to remember when lifting rocks and stones is that most mayfly and stone fly nymphs are fast creepers, so the quicker you lift a rock out of the water, the better your chance that the nymphs haven't scurried to another rock.

For catching winged duns, spinners, or any insects that fly, a fine-meshed butterfly net is a very handy item. When strictly insect hunting and collecting, this type of net is the only way to go. But when fishing, I feel a fisherman has enough gear to carry without bothering with the bulkiness of a butterfly net. There are hand aquarium nets on the market that are small and easy enough to carry in your vest, but I find that my hands or my hat can do the same work as these nets.

Some collectors get many of their winged insects by collecting the nymph stage and taking them home to an aquarium to hatch into adults. This is fascinating, but bothersome and more work than it is worth.

Assuming this first type of amateur entomologist has made some collections during his day astream and has

gone home, it is time to separate the captured specimens into holding bottles. (I like the clear one-ounce medicine bottles which can be bought at most drug stores.) If you tie your own flies, you can now sit down at your fly tying vise and try your hand at imitating the captured specimens; or, for the nontyer, it is simply a matter of giving the specimens to your professional and letting him do his thing.

One very important thing to note here is that the true color and translucency of any fly body, whether dubbed fur, chenille, silk, etc., comes out only when soaking wet. So, after tying your imitation, submerge it in water before comparing it to the natural. My method for comparing is to put my imitation in the same bottle containing the natural. By holding the bottle against the light, accurate comparison can be made.

If you are interested in the identification of your captured specimens, there are quite a few good books on the market today which are a great help. Ernest Schwiebert's *Nymphs*, and *Matching the Hatch*; Art Flick's *Streamside Guide to Naturals and Their Imitations*; and Doug Swisher

and Carl Richard's *Selective Trout* are a few that are excellent. These books describe all the major and many of the minor fly hatches in this country.

The other type of amateur entomologist is the observer-recorder. He also carries a seine, but instead of a collecting jar he substitutes a small pad of paper, a pencil, and a hand magnifying glass. Instead of collecting insects, this fly fisherman — entomologist inspects his captured specimens with his magnifying glass and simply writes his observations in his note pad. He can then tie his imitations from the observations.

The fly fisherman who ties his own flies is the fellow who will benefit most from collecting and observing insects. He can sit at his vise with his collecting bottles, or notes, in front of him and come very close to imitating the insect in color, size, and shape. If his imitation fails, back to his vise he can go for more experimentation until success is achieved. Also, his expense is going to be a fraction of that of the fellow who has to buy from a professional. More importantly, the pride and self-satisfaction gained by tying a successful imitation of your own is priceless.



KEN SINK HONORED—

Kenneth C. Sink, of Indiana, Pa., retired chairman of Trout Unlimited's National Board of Directors and Past Chairman of TU's Pennsylvania Council was recently named to the Pennsylvania Fish Commission's "Order of the White Hat" . . . "In recognition and appreciation for unselfish contributions to the programs and goals of the Pennsylvania Fish Commission, and efforts willingly and untiringly made in the general cause of conservation for the betterment and benefit of the people and the natural resources of this great commonwealth; and, by the aforementioned action, will now and forever be recognized as one of the Pennsylvania Fish Commission 'Good Guys' . . ."

UPCOMING EVENTS—

LINESVILLE OPEN HOUSE

The Linesville Fish Cultural Station will hold its annual Open House on Sunday, April 11, 1976. If you've never visited an installation completed devoted to the rearing of fish, put it off no longer! Demonstrations continue all day long. See man and nature working together.

PENNSYLVANIA HOSTS 1976 NORTHEAST FISH AND WILDLIFE CONFERENCE

The Pennsylvania Fish Commission and the Pennsylvania Game Commission will be the hosts for this year's meeting of this body of conservation leaders at the new Hershey Convention Center in Hershey, Pennsylvania.

The conference will run from April 26th to April 29th, according to General Chairman Harvey Roberts, Deputy Director of the Game Commission.

CO-OP NEWS

by Bill Porter

An amalgamation of two clubs has produced a successful nursery in Bedford County — better known as the Southern Cove-Ravers Gap Sportsman's Club. And not only did two clubs combine to develop a successful trout rearing program, but countless springs seemed to join tricklets to provide the water. We can remember the ditches dug in a yard to drain off water, the walled-in spring for holdover fish in another part of the property — in fact everywhere one looked there seemed to be good water gurgling out of the ground.

A single pond served the initial effort with approval granted in July of 1970. At that time, the enclosed spring mentioned above did hold some of the club's larger fish. And an interesting sidelight to those trout was their peculiar swimming formation. They seemed to get in line and swim in a continuing circle, moving clockwise just out of the path of the bubbles coming up from a spring in a center of the rather small oval enclosure. Anyway, time has passed since that visit and the club now operates three nursery sites located within a reasonable distance of each other. All three are pond-type units with some drainage capabilities to assist in seining the trout at stocking times.

The original nursery, Millbrook #1, utilizes a pond in front of a grain mill below the impounded spring mentioned earlier. The water from this pond drains into Potter Creek, one of the streams stocked and also the upstream location of the second pond, Millbrook #2. The site was approved in September of 1974 and is used primarily to carry the holdover trout. A third pond, Still Nursery #3, received approval in January, 1975, and was

being used for holdover fish and as an auxiliary unit in case of any emergency in either of the other two ponds. Following the pattern of "water, water everywhere," nurseries #2 and #3 actually use spring water that has been channeled from nearby homes into the ponds. The springs actually rise in the cellars of these dwellings so abundant is the water supply in the area.

As in all successful cooperative nursery projects, there must be people involved that care and are willing to work. Among others in the Southern Cove-Ravers Gap group are Clyde Claycomb, nursery manager, Glen Walter, Southern Cove president at the time of our information, and Herman Ritchey, Ravers Gap president in a similar time frame. Clyde has the rather unique position of being the only nursery manager the group has ever had and is currently responsible for all three units. And what may be more important, he is the property owner of the original site for Millbrook #1 where the whole thing started.

Of course, the product of these men and others would be the trout. In this case, the club has specialized in rainbows with considerable success. About 10,050 fish have been received to date with a stocking figure of over 8,000. This equals about 2,000 a year for area waters and each year's stocking contains a reasonable number of larger holdover fish. The diet to date is pellets with few or no problems and little reason to change to other acceptable food forms.

And it follows that as trout develop and reach stocking age, they must be stocked. Streams receiving Southern Cove-Ravers Gap fish include: Potter Creek, Yellow Creek, Beaver Creek, Three Spring, Hickory Bottom Run, Maple Run, among other area streams. Most of these waters are relatively small and provide scenic as well as interesting fishing locales.

Then the story can't end here for the trout themselves are doing the cooperative thing. Successful spawning of the rainbows is a phenomenon observed over the several years of the club's history. Extensive fall spawning activity occurs within the framework of the ponds themselves and nearby Potter Creek where many of the trout are stocked and have established a

natural replenishing population. This is a plus factor not anticipated in the original dreams of the sportsmen. From the official bi-weekly report of the cooperative nursery program comes this comment: "Spawning activity among holdovers at Millbrook Nursery #2 is a common sight during late fall. Fish from Potter Creek also migrate upstream to the outlet to spawn. Many rainbow, brown, and brook trout fry can be observed in the early spring."

And does the club have any problems? Most cooperative nurseries do sooner or later through no fault of the operators. The biggest problem we recall on our original visit was how to capture a large trout that somehow or other got into the pond with the new fingerlings. Finally a member was successful in fishing for it and releasing it into the holdover pond. And that didn't really seem to be a problem.

Southern Cove-Ravers Gap nurseries seem destined for many more years of service to their area's fishermen.



***Narrow spillway control and screens
reduce fish loss from higher
water or fish leaping out of ponds.***

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Fisheries biologists say that suckers and minnows, of which there are hundreds of species, are the most important forage fishes (food for other fish) in waters everywhere.

Fishing for trout or bass or any other gamefish in water where the bottom is flat and coverless is a waste of time. Fish will seldom be found there. They do their resting and feeding in water where they find shelter in the form of boulders, deep pockets, stumps, fallen trees, and other objects.

Artificial nymphs, "ticking" over the bottom of a trout stream, will catch fish, but at times a nymph floating off the bottom is also effective. This is when natural insects are hatching and moving toward the surface of the water.

In fishing two wet flies on a leader, use a brightly colored fly on the dropper and a darker pattern on the leader point. The theory is that the bright dropper fly will attract a fish, which will then see the more natural looking point fly and take it.

Sinking lines are excellent aids to fly fishing in deep water, such as lakes and stream pools. They help to get the flies down deep, whereas floating lines will keep the lures nearer the surface.

To preserve the quality of a fish, freeze it in water. A half-gallon milk container or a plastic bag can be filled with water, the fish placed inside, and the container is then placed in the freezer.

Caddis flies hatch mostly at dusk and during the night. These are good times to use imitations of these prolific aquatic insects.

Hooks in sizes 10 and 12 are excellent for use in bait fishing for bluegills, crappies, perch and other panfish. Baits live longer on the small hooks and the hooks are plenty large enough to hold fish of these species.

Heat is a menace to all monofilament lines and leaders. It causes them to become weak and brittle. So, never keep them in the direct rays of the sun or in hot car trunks for long periods of time.

Beware of shadows in fishing a trout pool. It is best to fish with the sun at your back, because fish rarely face into the glare of the sun. But, be cautious . . . if your body casts a shadow over the water, even a hungry fish will be spooked.

Matching the hatch can be tough when brown trout are feeding. An alternative is to select a dry fly that comes close to the dull colors of natural stream insects. Flies of this type in sizes 16 and 18 are more effective than larger ones.

Let the stream current help you fish. Cast upstream of the suspected lie of a trout and allow the natural flow of the water to deliver the lure of the fish.

Really big trout are cannibals by nature. They do not often feed on the surface but prefer to prowl the depths of a pool or close to rocks and ledges in the water. Lures and baits must go deep to attract them.

Catching trout on spinners and spinning lures is easier before insect hatches begin to appear in force. Trout, feeding on the insects, become discriminating and are wary of flashing lures.

Fish streamers with varying speeds and motions. Sometimes merely letting the lure drift with the current will bring strikes. But, at other times it may be necessary to retrieve the streamer with a slow and steady motion; and, at still other times, to retrieve it with short, rapid jerks.

Outside edges of fast-flowing currents are good spots to fish for trout. The fish, instead of battling the current, tend to range along its quieter edges in wait for food the water may carry within easy reach.

One for the Books?

Courtesy Saint Vincent News —

"I was just reading Tom Fegely's column about 'Animals That Buy Time'. Well, here is something about a Timber rattler that lived over 30 years in captivity."

HOWARD F. SHERLOCK
Retired Deputy Waterways
Patrolman

"Oscar," a four-foot timber rattlesnake which had been a living display in the Saint Vincent College Museum for more than 30 years, died on January 5, 1976. It was believed to be one of the oldest snakes of its kind living in captivity.

The snake was caught by Rev. Jerome Rupprecht, O.S.B. at Hicks Run, Cameron County, near the town of St. Marys (the latter in Elk County) in August of 1945. Fr. Jerome, director of the Museum, placed the almost

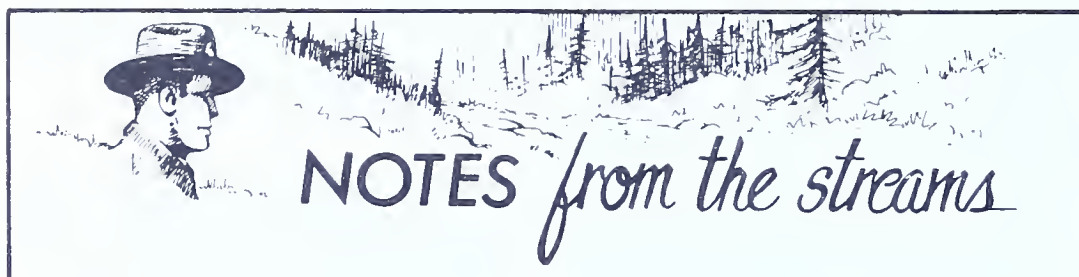
full-grown reptile in a display case where he remained for over 30 years. Thousands of museum visitors have seen Oscar, a quiet rattler who had, over the years, become the museum's star attraction. Fr. Jerome found Oscar dead when he took him his monthly live feeding.

Although the snake had become a pet for Fr. Jerome, the timber rattler (*Crotalus horridus horridus*) is the largest poisonous species in Pennsylvania, sometimes reaching a maximum length of about five feet.

Oscar is being preserved and will continue to be displayed. The Saint Vincent College Museum, located on the fourth floor of Alfred Hall, is open from 1:00 p.m. to 4:00 p.m. Sundays and at other times by special arrangement. There is no admission charge.



Fr. Jerome & "Oscar"



BUSY HANDS!

One evening at a Federation Meeting, District Game Protector Ed Gdosky related the following incident: During deer season, while he was on patrol on Route 29 which, for the most part, borders Harveys Creek, Officer Gdosky observed two men in full hunting attire walking along the roadway picking things up. Officer Gdosky stopped and asked the hunters what they were doing. They informed the game protector that they had already gotten their deer and were passing time waiting for a companion hunter who was still in the woods trying to bag his deer. What they were doing with this time on their hands was picking up litter along the roadway and creek using orange plastic Pennsylvania Fish Commission litter bags which were given to them during the past fishing season. These are what I call TRUE conservationists!

Claude M. Neifert
Waterways Patrolman
Luzerne County

CITATION?

After the inseason stocking of Chapman Dam, Warren County, during the winter trout season I decided to make a few casts to see if the trout would take a spinner in the 33 degree water. About the third or fourth cast the lure stopped dead, then began to give way as I pumped the ultralight in deep sea fashion. After a lengthy battle I landed my prize: a tennis shoe, about a size 13! Realizing that I had probably just landed the new state record, I carried my prize to the park office to have it verified where I inadvertently left it. A note from the park secretary that I received today read, "... tennis shoe is still here but the crayfish that was in it we returned to the lake."

Robert L. Steiner
Area Waterways Patrolman
Northwest Region

"KING FISH"!

It was cloudy and rainy the day I drove to Keystone Lake to see how the winter trout fishermen were doing. There were not many fishermen there that day and I sat in the car for a while before deciding to take a walk and talk to some of them. I spoke to a few and then approached two

men and a small boy. One of the men asked for stocking information . . . the other showed me a fine new rod and reel he had received for Christmas. After talking to the men for about fifteen minutes, I turned to go to my car. The lad asked who I was and one of the men answered, "He's the *Head of the Fish*," he comes here to make sure everybody obeys the law when they are fishing, Son. Some people call them "The King Fish."

I've been called a lot of things from "Carp Cop" to unprintables, but this is the first time I've been called "The King Fish" and "The Head of the Fish!"

Gerald L. Greiner
Deputy Waterways Patrolman
Westmoreland County

PLEASE DON'T!

Gerald Thompson, Deputy Waterways Patrolman, relayed the following event to me:

While on patrol on Lake Erie, a boat was observed towing a water-skier not wearing a USCG approved PFD. While boarding this boat and checking for required equipment, I asked the operator if he had a "throwable device" aboard. He asked, "What is a throwable device?" I then explained it could be a buoyant USCG approved cushion, or a ring buoy. To this he replied, "The only throwable device I have aboard is an anchor!"

Norman E. Ely
Waterways Patrolman
N/Erie County

TAKE CARE . . .

The words "White-Water Enthusiast" scare me. Why? Not because of the man or woman who has mastered his sport and mastered it well. No, it has nothing at all to do with the experienced enthusiast. What really scares me is the guy who buys a canoe, jonboat, rubber raft, or kayak on sale at some department store and, all of a sudden, he is an expert boatman overnight! First thing he wants to do is run the fast, white-water. Sure he knows how to operate his craft. Ask him, he saw it on the olympics on TV! What's a PFD? Is that some kind of pill or something?

Ammon F. Ziegenfus
Waterways Patrolman
Berks County

THANKS FOR NOTHING!

For the past few years I have been trying to get a section of stream opened for public fishing that is located on one of the large clubs in Pike County. Some success was coming along till this past year. I would like to thank all of the thoughtless, inconsiderate, unsportsmenlike poachers who were so fish-hungry that they had to fish on the private waters of this club the first two days of trout season. You have saved me the trouble of trying any more to get this section of water open so that others could enjoy fishing. Now I won't have to worry about stocking it for others. This section of stream will now be closed for good!

I feel that it is about time that sportsmen start to police the hunting and fishing public because it is getting later than you think. Maybe they want to hunt and fish on state lands only.

Joseph E. Bartley
Waterways Patrolman
Pike County

CLOSE ENOUGH!

When checking a boatowner's safety equipment on the Ohio River, it is standard procedure to give him one of our orange litterbags. During the course of a boarding last summer, I inquired, "Did you people get one of our litterbags?" This small boy popped up and said, "No! But we got a garbage bag!"

Don Parrish
Waterways Patrolman
Beaver County

FEAR NOT!

Since the theater attraction "Jaws" appeared in Erie, sign at one motel reads: "NO SHARKS IN OUR POOL!" I have also had two inquiries whether the muskellunge would attack people swimming in Lake Erie!

Norman E. Ely
Waterways Patrolman
N/Erie

SURPRISE! SURPRISE!

Fishing has its many varied experiences. For example: I have heard stories of fly fishermen at night having their fly taken in the air by a bat; a plug taken in the air, or off the water, by an owl. But, *this* is a new one.

Jim Place, of Towanda, was fishing on the river recently with tip-ups. A flag went up, Jim took control of the device to haul in what he thought was a trophy fish. But, to his surprise, up through the hole came an American Mreganser Duck! Jim removed the hook and released it. But, the

story shouldn't end here. I wonder if Jim wasn't surprised as much when the duck came up through the hole as was a lady beaver trapper he pulled a joke on a few winters ago. When she pulled her trap up through a hole in the ice, in the trap was a half-gallon bottle of wine! In conclusion Jim was surprised to have no trophy fish . . . Nancy was surprised to have no beaver . . . I wouldn't be surprised if Nancy didn't wish this surprise on Jim!

*Willard G. Persun
Waterways Patrolman
Bradford County*

PERSISTENT!

I decided to take a day off and spend it ice fishing near my former home at Nessmuk Lake south of Wellsboro, Pa. After catching two perch, my son threw back all that were too small. I caught a nice perch and threw it on the ice. About an hour passed and we caught no other fish so we decided to call it a day. The fish was caught at about 3:30 p.m. We returned to Emporium at about 5:30 p.m., and I took the fish out of the plastic bag to clean it and I noticed it had quite a bit of life so I placed it in the sink. After about two hours the perch was back to normal. After surviving this ordeal, I didn't want to kill it so I took it to a nearby water area and stocked it. I never believed that a perch would stay alive after *three hours out of water*.

*Stanley Hastings
Waterways Patrolman
Cameron County*

REALLY?

I recently overheard an argument between two fishermen over where the best fishing was: Pennsylvania or Canada.

"*I'm still going to Canada,*" one fellow chided.

"*I'll wait another year and the Fish Commission will have figured out how to bring Canada to us,*" came the reply.

*Robert Lynn Steiner
Area Waterways Patrolman
Northwest Region*

MEMENTO!

While in the process of settling a case that involved a man who was apprehended for foul-hooking and keeping a trout, I handed the man my pen so that he could sign the field receipt. When he finished signing the document, he noticed that the pen that I had given him to use had "*Pennsylvania Fish Commission*" printed on it. He pleaded with me to give him this pen as a souvenir of the transaction. This is what I did and it left the man very happy indeed. Previous to this, I had thought only pens that signed presidential documents were

treasured in this manner! I only hope that the pen will remind him to abide by the rules. If it does, I will be as happy as he seemed to be.

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

WORTH EVERY PENNY!

My father-in-law visited for seven days from New Jersey late last June. He paid \$7.50 for his 7-day Tourist Fishing License Sunday morning and hours later caught a 16-inch palomino. During the course of the week he caught and released many northerns, bass, panfish and trout. On Saturday morning he finished up his week with a 13-inch palomino. He never complained about the price of the fishing license even though he paid as much for a week of Pennsylvania fishing as a resident pays for a year.

*Robert Lynn Steiner
Area Waterways Patrolman
Northwest Region*

ANY BIG ONES?

A gentleman called one day and asked, "*Did you stock Raccoon Lake yet?*" I replied, "Yes sir, on March 1st." "*How many did you put in?*" he inquired. "*Six thousand,*" I answered. "*Any big ones?*" he asked. "*What do you consider big?*" I quizzed. The caller retorted, "*Oh, you know, 11 and 12 inches.*" "*A whole truck load!*" I exclaimed.

*Don Parrish
Waterways Patrolman
Beaver County*

COOL CATCH!

Richard Walton, a sportswriter for a local newspaper (and also a Deputy Game Protector), called me one night to give me the following story. A fisherman reported to him that while fishing in one of the large holes located on upper Bowmans Creek, he suddenly experienced a heavy strain on his line while reeling in. Much to the angler's surprise he had hooked onto a full six-pack of beer. The fisherman reported that after the long hard battle to retrieve this catch, he sat down and immediately enjoyed some. Does this sound like a *fish* story or not?

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

BEWILDERED!

Deputy Paul Daubenspeck seemed a bit confused as I watched him checking a fisherman who was trying his skill along the Little Lehigh Creek. I had checked some nearby anglers and returned to the car. Mr. Daubenspeck, I thought, was tak-

ing his time checking that one lone fisherman about 100 yards downstream.

Looking through my binoculars, I thought I would check on his whereabouts. AHA! There was my faithful deputy, standing near the fisherman, scratching his head, taking his hat off, walking in circles, looking quite bewildered.

Returning to the car, he said that I had better come down and talk to this man because the man was playing games with him. We approached the elderly but robust looking gentleman and found that he had two short bass . . . out of season . . . one sucker and one trout in his possession. He also spoke no English, but said quite a bit in French, which was the source of Deputy Daubenspeck's confusion!

This quaint Frenchman had his nonresident license in a little paper bag with some hooks and other fishing equipment. Checking with his daughter, who lived nearby, we discovered that he had just recently arrived in our country and the first thing he wanted to do was to go fishing.

While pursuing his sport, he brought entertainment not only to himself, but also to my deputy and me. After about a half-hour of "sign language" we managed to communicate to him some of the rules regarding fishing in Pennsylvania!

*Fred Mussel
Waterways Patrolman
Lehigh County*

NEW TWIST?

While stocking the Mill Rift Brook, members of Lost Camp came out to assist in the stocking of the upper reaches of the stream. This area requires a long carry and sure gets tough on the arms and legs with buckets. These men came out with large trapping baskets lined with two big plastic bags, one inside the other. The fish were placed in the inside bag and sealed and then transported to the stream. These men said that this was the easiest way they had ever had for getting the fish to the stream.

*Joseph E. Bartley
Waterways Patrolman
Pike County*

OH BOY!

During the course of our duties, we are mistaken for Rangers, Utilitymen, Gas Station Attendants, Dog Catchers, and a host of other things, but this is a first. Officer Jerry Crayton (of Allegheny County) and I were sitting outside a drive-in restaurant in Beaver Falls one afternoon eating a sandwich when this guy drove up and asked, "*Hey! You guys from the Game Preserve?*"

*Don Parrish
Waterways Patrolman
Beaver County*

FLY TYING

A Tricorythodes Nymph

by Chauncy K. Lively

photos by the author



The completed Tricorythodes nymph.

It seems a paradox that a genus of mayflies which has prevailed on earth for several millennia was only discovered by anglers as recently as a few decades ago. Yet, despite its abundance in many streams, the little two-winged *Tricorythodes* went unheralded . . . except by entomologists . . . until relatively recent years. Charlie Fox aptly called it one of the "hidden hatches" and it is true that unless one knows what to watch for its presence could go unnoticed.

Indeed, many a hapless angler has fished right through the hatch without suspecting that an emergence of duns or a fall of spinners was taking place, save for the frantic feeding activity of the trout. It may be that the tiny insects were formerly mistaken for midges — or perhaps anglers were loathe to believe that mayfly hatches could occur at such an early hour. For whatever reason the *Tricorythodes* was neglected in the earlier years, it is now recognized as one of the most fascinating hatches in all of fly fishing.

To think of the *Tricorythodes* as anything but a first-class dry fly insect would seem to be a sacrilege but there are times when its nymph warrants a representation, too. I first began experimenting with a tie for the nymph on a cold February evening quite a few years ago, and, like many patterns born of winter boredom, it remained unused in my box for several years. It finally had its baptism in 1968, on the South Branch of the Michigan Au Sable River, and the incident was an eye-opener.

Early one August morning I had

gone with young Doug Slocum to a beautiful stretch in the Mason grant. We arrived at the river above a long bend as the *Tricorythodes* began to emerge and in the low, slanting rays of sunlight we could see many duns leave the water in characteristic slow, vertical flight. Moreover, the trout were rising everywhere — not with the gentle rise forms usually associated with their feeding to small insects — but with slashing, noisy splashes that sent one's adrenalin coursing.

Doug chose to go below the bend and work upstream with a dry fly and I decided to stay and watch the water for awhile. Guessing that the hectic feeding was to emerging nymphs, I bent on one of the untried *Tricorythodes* nymphs and began fishing it across and down, allowing it to swing just under the surface. I don't mean this to be a brag, which it isn't, but in the next hour or so *every* cast brought a hooked trout. Some were lost but many were landed and released and all in all, it was about the busiest fishing I had ever encountered.

I met Doug at the bend and he, a skilled dry fly fisher, reported that he hadn't caught a single trout. I told him of my experience, gave him one of the little nymphs, and he promptly began to emulate my performance. Then he disappeared behind the back-channel side of a small island and I soon heard an outburst of yelling and splashing. When I arrived on the scene Doug was reeling in an empty leader and muttering to himself. He had just lost, on 7X, the biggest brown trout he had ever hooked in daylight. There have been many pleasant experiences with the

Tricorythodes nymph in subsequent years but none could match that wild morning on the Au Sable.

The nymphs of *T. atratus* and *T. stygiatus*, the two predominant species in the East and Midwest, range in coloration from dark to light brown and our pattern represents a compromise between the two extremes of color. The pattern is basically a Skues-type nymph; and, because of its small size, no attempt has been made to simulate the flat abdomen of the natural, nor does this feature appear to be necessary. In the original pattern I used the tips of three pheasant fibres as tails and continued winding the same fibres to form the abdomen. However, the tails proved too fragile to be practical and muskrat guard hairs were substituted with excellent results. No problem of durability is presented in the use of pheasant tail fibres to form the abdomen, provided it is ribbed in the opposite direction with gold wire. Although a size #20 hook of 1X short shank is recommended, the nymph may also be dressed on a regular shank #20 by tying in the tails slightly ahead of the bend and dressing the body a little shorter than normal. The actual body length of the nymph, less tails, is about $\frac{3}{16}$ ".

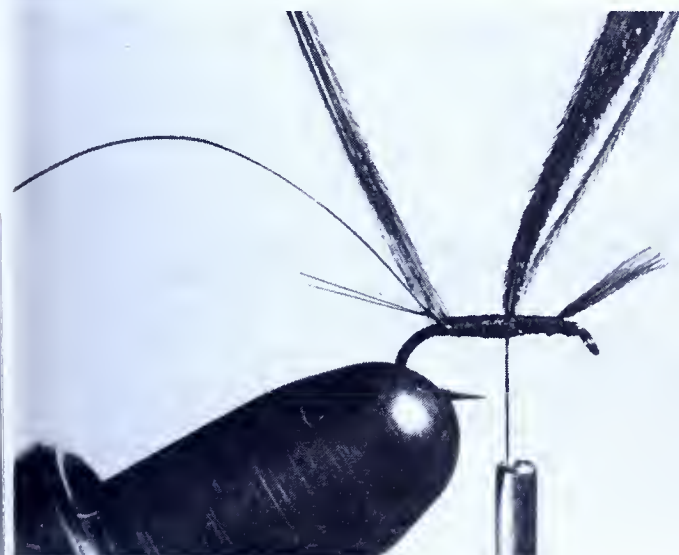
I'll have to admit that my favorite *Tricorythodes* fishing is to the fall of spinners, followed in preference by fishing to the duns on the surface. But when the trout ignore the duns for emerging nymphs I'm not one to disappoint them and for those times the *Tricorythodes* nymph has found a permanent place in my box.



Clamp a size #20, 1X short shank hook in vise and bind fine, black thread to shank behind eye. Select eight brown fibres from a ringneck pheasant tail feather and tie in behind eye with tips protruding in front by about the length of the shank. With fibres positioned on top of shank, wind thread halfway to bend. Then pull fibres upright and take a turn behind to secure.



Wind thread back to bend. For tails, select three brownish muskrat guard hairs and tie in at bend. Spread tails and make a turn of thread underneath and against base of tails. Tails should be slightly longer than shank.



Select two pheasant tail fibres and tie in, along with a 3" length of fine, gold wire, at bend. Then, with thread, build up a slightly tapered underbody. Wind thread forward to base of pheasant fibres at middle of shank.



Twist the two rearward fibres together and wind forward clockwise, to form abdomen. Tie off at middle of shank and trim excess.



Wind gold wire counterclockwise in spaced turns, as ribbing, and tie off. Cut or break off excess. Then wax about 1" of thread next to shank and apply dubbing of brown fur or synthetic. Wind dubbing forward to form thorax and tie off behind eye.



Split the pheasant fibres in front into two equal halves and press along sides to form legs. For wing case, pull vertical fibres forward and down over thorax. Tie off at head and trim excess, as shown. Then whip finish head and apply a drop of head lacquer.

Early Season Canoeing Requires Caution!

by Alan MacKay

Marine Services Specialist

featuring

some words of wisdom

by Walter Pilewski,

President, Allegheny Canoe Club



Swampings and upsets can and do occur . . . be prepared . . . know what to do!

The sport of canoeing, perhaps unlike any other boating activity, is dependent upon the skill of the paddler. The canoe, rich in history and tradition, is nevertheless a fragile craft that can be decidedly less than stable when handled improperly. Successful paddling, particularly on a rapidly moving body of water requires a delicate balance of coordination and dexterity. No textbook written can

properly prepare an individual to undertake the sport — it requires practice.

In rummaging through our files on canoe-related activities, we ran across the following letter written to the Commission staff by Walter Pilewski, President of the Allegheny Canoe Club.

Mr. Pilewski has been associated with canoeing for more than 20 years

and involved with both white-water canoeing and kayaking. He is a member of the American Canoe Association, United States Canoe Association, the American White-water Affiliation, is a certified Red Cross Instructor and recipient of the Presidential Sports Award for Canoe and Kayak.

His message was so succinct and to the point, that we are running the main body of his letter, as written:

"It saddens me greatly to read about a death-related canoeing accident. When analyzing canoe-related accidents it is obvious that just about all these accidents could have been prevented if the canoeist practiced good safety techniques. As a promoter of safe canoeing programs, I believe that through organized programs of this type many canoe-related accidents can and will be prevented.

"Now that canoeing and kayaking to a lesser degree is in the middle of a popularity fad explosion, the number of water-related accidents will undoubtedly increase.

"There are canoe safety rules or (guidelines) which are a part of the pre-safety involvement canoeists must take seriously in preparing themselves toward the sport of canoeing. These rules and associated facts are as follows:

"Rule #1: KNOW HOW TO SWIM. Be a competent swimmer with ability to handle yourself underwater.

"Drowning is the second leading cause of death in the United States for persons from age 4 to 44, exceeded only by motor vehicle accidents. More than 7,000 persons drown annually, 4,700 of whom did not even intend to get wet. (Two-thirds of those who drown do not know how to swim, while half are alone at the time of the accident.)

"The Red Cross canoeing programs emphasize swimming ability, and does require a swim test as part of the prerequisite requirements. People taking up canoeing would have a tremendous advantage if they would learn to swim and swim well first. Organizations like the YMCA and Red Cross are available with qualified instructors to teach swimming skills.

"Rule #2: WEAR A COAST GUARD APPROVED PERSONAL FLOTATION DEVICE (PFD) in rough water or threatening weather. Know how to use your PFD, fit and adjust to the person who will be wearing it, have children and nonswimmers wear it at all times, test it annually; and, don't sit on your PFD especially the kapok type.

"The inexperienced boater is more likely to drown without a PFD than be caught by strainers (brush, fallen trees, bridge pilings or anything else which allows river current to sweep through but pins or snags boat and boater against the obstacle), or

reversals. The odds can be beaten by wearing a PFD, watching for strainers, and avoiding reversals. In fast flowing water situations, although life jackets fail to be the simple difference between floating and drowning, even wearing a life jacket, the paddler should be prepared to spend brief periods underwater.

"Rule #3: NEVER CANOE ALONE, a preferred minimum is 3 craft.

"Rule #4: WEAR WOOL CLOTHING (LONG JOHNS) OR A WET SUIT WHEN THE WATER IS COLD, cold water is a quick killer.

"In the early spring (and late fall) boaters are faced with one of the most serious hazards a river can offer: *cold water*. We can't tell exactly how long a person will last in cold water. Physical fitness is not an indicator. The physically fit person may be the first to go because body fat provides protection against cold. If the water temperature was 32.5 degrees, you would be immobilized in less than 5 minutes, and unconscious in less than 15 minutes. Your survival time would increase as the water temperature rises for example, in 40 degree water you would be immobilized in less than 7.5 minutes, and unconscious in less than 30 minutes.

"Sudden immersion in cold water may produce serious consequences. Immediate death may result from drowning or cardiac arrest. Exposure to cold water anywhere from a few minutes to an hour or more leads to hypothermia, a lowering of the core body temperature. Unconsciousness and consequently a risk of drowning occur whenever the core body temperature is reduced appreciably. A further lowering of body temperature inevitably leads to death. The cold water effects on a boater seems to be the hardest thing to get across, and probably given the least attention by the boater.

"Rule #5: WHEN SPILLED, KEEP UPSTREAM OF THE CRAFT. Be aware of your responsibility to assist your partner, leave your craft only if it will improve your safety, your personal safety must come first. If rescue is not imminent and the water is numbing cold, or worse, rapids follow, then strike for the nearest shore.

"A canoe fifteen feet long, hurled against a rock by a fast current of say

ten miles an hour, could be held there by a force of over four tons. It would be like a closing vise on the paddler who allowed himself to get into this situation. The trapping of a paddler between boat and rock is so serious that it should be avoided at all costs.

"Rule #6: BE SURE THAT AN EXPERIENCED PADDLER HAS A THROW LINE, FIRST AID KIT, AND CANOE REPAIR KIT.

"Rule #7: NEVER GET AHEAD OF THE LEAD CANOE. The person leading a trip should be a responsible person with a full knowledge of the river and be an experienced canoeist

"Rule #8: NEVER LAG BEHIND THE SWEEP OR DRAG CANOE. This would be the last canoe designated, and the position held by an experienced paddler.

"Rule #9: KEEP THE CANOE BEHIND IN VIEW.

"Rule #10: DO NOT RIDE THE TAIL OF THE CANOE IN FRONT OF YOU. This rule is most important in rapids.

"There are more rules, but these are the basic ones canoeists can't afford not to know.

"All the information I have received leads me to believe that the main causes of canoeing accidents are: a PFD violation, inability to swim or swim well, unawareness of cold water effects (hypothermia), and failure to stay upstream of a capsized craft.

"The beginner canoeist, without knowing what skills are demanded for his survival will venture innocently into situations he should have avoided. Beginning canoeists will continue to mismatch their limited skills and lack of safety preparedness to the waterway they choose to travel; unfortunately, in some instances, for the last time."

WHERE TO LEARN

HOW TO DO IT:

The Fish Commission still has a limited supply of the publication, *"Canoe Country Pennsylvania Style."* In addition to maps showing the more popular canoeing areas throughout the Commonwealth, *Canoe Country* lists a host of organizations who offer skill development programs for paddlers. Write for a copy — they're free. Address your request to: Pennsylvania Fish Commission, Bureau of Waterways, P.O. Box 1673, Harrisburg, Pa. 17120.



More temperate weather makes early fishing and boating more tempting, but jackets are still in order for a while.

Ashore & Afloat

by Gene Winters

There is little question April sees a greater deluge of Pennsylvanians take to lakes and streams than any other month. It certainly is no secret the *trout* is the principal reason for the sudden mass migration to water's edge and beyond. It is a fitting tribute to this fine, scrappy and somewhat snobbish aquatic creature that it exerts such universal attraction.

The opening of trout season — coincidentally or not — also triggers, in part, a couple of almost simultaneous reactions. It heralds the coming of more temperate days and nights and signals the beginning of a very active angling and boating season. The wise boater, having done his maintenance chores last fall, is ready for his annual shakedown to remove winter's cobwebs from mind and machinery alike. While the "true" boating season may still be some weeks away, the

boating fisherman is already sharpening his hooks, restocking his tackle box, and getting ready to "fine tune" his angling expertise. It is hard to believe such a short time ago ice crystals danced across the outside world and to think, so few weeks ago, we glided smoothly on glittery silver blades over our favorite fishing waters . . . as if content in secret knowledge that some unheralded protector of nature's creatures had taken the fish home for safekeeping over the winter.

Bicentennial red, white and blue fishing licenses decorate many a skipper's cap as the first boats begin to hit the waters. Countless windbreakers still thwart the dying gasps of a strangling winter. How very fortunate we are to have the opportunity to enjoy our sport in some shape or form 365 days a year for such a nominal fee; no group of sportsmen in history were ever so lucky as the anglers of this golden day and age. And to have *your very own boat* to go out where you *know* the fish are waiting!

As the boats begin to churn the waters in increasing numbers, the fish, too, grow restless and begin to stir and limber up. But if the boating angler has grown any wiser, any smarter over the long, bleak winter, so, too, has his prey. We'll parade out all our gizmos and gadgets: depth sounders and fish

finders, maps and lake surveys, compasses and radios, nets and gaffs, oxygen and temperature meters, shiny new reels and shimmering new rods and all the paraphernalia. But as we do, countless fish will be recalling days gone by . . . some, still smart from the angler's hook that *almost* landed them a season ago. Others will recall past signs of danger and look more than once at the yellow-feathered spinner before they make a move. Still others will recall the sounds of a revved-up outboard, a carelessly dropped tacklebox, a squeaky oarlock. They, too, are preparing to go forth into battle! (There's even a rumor some of them have gotten so big as to be dangerous!)

In spite of our best efforts, finest boats, and ultrasophisticated gear, most of the fish will never even see the inside of our boat . . . much less end up in our freezer or above the mantle. For, in spite of the "angler's edge," most fish are still smarter than man. But, bankside fisherman or boating angler, when it's all said and done, I'm sure we wouldn't have it any other way. A boat can be a valuable tool in the pursuit of our quarry; but, by itself, never caught a single fish! Come to think of it, I still don't know of *anything* that will guarantee you'll catch a fish. But it sure is a heck of a lot of fun trying, isn't it?

*Maintenance
done last fall means
a quicker start on the new
season. Repairs put off serve
only to delay that first trip afloat.*



*Launching day
is at hand at last!
Although it's still a bit
cool, it's fun to be afloat once
again and summer is not too far away.*

How to "Evict" Worms

by Loring D. Wilson

There may be many purists who would not deign to use bait when they can fling a piece of plastic for six hours a day, but I am not one of them. I use artificials much of the time, when I am fishing solely for sport; but then there are those days when my stomach cries out for a mess of crisp fried panfish and the ruddy things seem to have catalogs of all the hardware that has ever been made. When those days come, I go to bait, and one of the prime baits for panfish is the lowly earthworm.

However, I dislike digging them up. For one reason, using a shovel is too much like work; for another, I end up with too many diced worms. And the "better half" objects strongly to my crawling around her flower beds in the middle of the night with a flashlight and a jar ever since I mashed her prize Chrysanthemum last year.

There are many sorts of artificial methods for getting worms to come to you, from turning on the sprinkler system to electronic devices that shock the little devils out of the ground. But I have hit upon a method, quite by accident, that works all the time, no matter what time of day or night, and no matter what the weather or the condition of the ground (and anyone who has tried to dig down to worms in the sun-baked earth of late August can

readily see the advantage to this!).

I make my own homemade wine, and occasionally some of it turns to vinegar. There seems to be no rhyme or reason to it, but it happens; and, when it does I generally dump the vinegar into the yard. Last year I happened to do it while I was mowing the lawn, since the vinegar made the house smell like an oversized pickle. As I came around to the spot where I had dumped the stuff I found the patch of ground covered with earthworms! It was an excellent excuse to put the lawn mower away and go fishing, but it also started me thinking. The next day I poured a cup of commercial vinegar into the yard and sat down to watch. Within five minutes earthworms started wriggling out of the soil.

I have tried it at various times throughout the past year, and it always produces results. If the ground is very dry the action can take up to fifteen minutes, but the worms still come out. In moist weather, or in rich loam, where the worms are close to the surface, the results are almost instantaneous. Therefore, I now save wine that goes bad, and if I have a good streak I deliberately make five gallons of vinegar for worm eviction.

You can make your own vinegar quite easily. Fill a two-gallon crock half full of grapes and mash them with



the end of a 2x4 (you can also use apples or any other fruit). Add two pounds of sugar dissolved in a gallon of hot water. Fill the crock to the rim with cool water and add one package of dry yeast. Let it sit open under the porch or in the garage until your nose tells you it has turned to vinegar, pour it into bottles, and you will have quite a few worm treatments . . . very inexpensively.

I generally use about a cup of the concoction, and it produces, in decent soil where you know there are worms, between twenty and thirty night-crawlers, which is enough for a day's fishing for me. Naturally, the wider an area you treat the more worms you are going to get. The only time it won't work is when the ground is frozen and the worms are well below the frost line. Give it a try. I believe you'll find that the worms have never come so easily.

According to the author, with a jug of "magic potion" and a few minutes of your spare time, you'll have all the earthworms you can use with little or no physical work on your part.



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Consider These Consequences:



Over and above raising fish and protecting them, teaching watercraft safety and enforcing those laws and trying to manage the fisheries of the Commonwealth, we find that from time to time we have to take a position on issues that seem to be outside of our immediate influence.

A good example was the recent proposal for Energy Parks in as many as eleven different locations throughout the Commonwealth. The Commission did react with a position after wading through over 48 pounds of paper that comprised the background material provided by the Governor's Energy Council. In arriving at a position, we considered such factors as thermal pollution, the deleterious effects of the enormous water reservoirs needed for cooling and low flow augmentation, the disposal of fly ash, the emission of sulphur oxides, and visual intrusions.

The sitings of these proposed Energy Parks were almost consistently in areas that would affect our cold water fisheries—thus our concern with the discharge of heated water which could result in complete elimination of the trout populations. If discharged heat were dissipated into the atmosphere, the resulting vapor could combine with the unremoved SO_2 and particulate matter would cause acid rain—harmful to both terrestrial and aquatic environments. The enormous water reservoirs necessary for cooling and low flow augmentation would damage our trout streams by the reduced flows and warm water overflows and by their very size would gobble up even more of the streams in the headwaters.

For each 1,000MW of electricity generated from fossil fuel, it is estimated there will be about 367,000 cubic yards of fly ash to dispose of annually. Thus for a 10,000MW Energy Park, with half of its capacity derived from fossil fuels, thirty years of generating would produce 55 million cubic yards of fly ash. The proposed method of disposal would be to dam up "small" valleys, pipe the stream through the area and fill the valleys with fly ash. Every one of the sites selected for such desecration contain trout streams, either wild or stocked; in some cases both. In high runoff, there is the possibility of permitting a slurry of fly ash to pass downstream to suffocate miles of stream bottom.

To get rid of the SO_2 and particulate matter required by national emission standards, five to ten stacks in the 1,000 ft. variety would concentrate the emissions with the possibility of acid rains, which are already detectable from presently scattered locations. These acid rains could contain as much as 9,000 pounds of SO_2 per hour—per stack—even if everything operates properly. Ten stacks such as that could have a disastrous effect on vegetation which would then cause increased runoff, more stream surface exposed to natural warming effects, and the siltation would increase immensely.

Most fishermen enjoy the aesthetics of their fishing experience; and, to see many acres of wilderness stripped of growth and replaced by atomic reactors, generating plants, coal piles, 500 ft. cooling towers, transmission lines and 1,000 ft. smokestacks certainly detracts from such an experience.

In summary, the Commission has taken a position as being opposed to the Energy Park concept as presently proposed, and prefers the scattered concept which dilutes and disburses the effect and potential pollution.

When the present state of technology advances to the point that adequate safeguards against pollution can be assured and our aquatic resources preserved or enhanced—or if the Energy Park concept for smaller facilities can be adapted to environmentally and economically depressed locations, we will take another look at them.

In the meantime, this is our position and we don't think that you would expect us to have any other and still remain objective.

Ralph W. Abele,
Executive Director

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Volume 45 - No. 5

May, 1976

CONTENTS

Meet the Amur Pike by James W. Meade	8
Fishing the Real Trout Bugs by Theodore E. Kiffer	12
Sunfish Saturday by Dave Landis	14
Juniata River Trout by Gerald Almy	18
Bluegill Fishing Refined by Richard F. Williamson	22
You Can Get There From Here by Alan MacKay	28

Front Cover: The month of May gives Pennsylvania anglers such a varied choice of angling that it's difficult to "pick a prey"! A lake such as Pike County's Shohola Dam is a good bet for the opening day of pickerel season. Additionally, it has a good population of bullheads and panfish that will make a trip to Shohola well worthwhile.

Photo by Tom Fegely

Back Cover: Big things are expected from York County's Lake Marburg, and "BIG" is what we're getting. Those king-sized perch are just a sampling of what Marburg has to offer. Getting more famous each year for trophy muskies and northerns, it will no doubt produce a new state record if current growth rates continue.

Photo by George E. Dolnick, Jr.

MONTHLY COLUMNS

FISHING OUTLOOK	2	ANGLER'S NOTEBOOK	25
LEAKY BOOTS	4	FLY TYING	26
TAKING A CLOSER LOOK	6	ASHORE & AFLOAT	30
STREAM NOTES	24	CO-OP NEWS	32

James F. Yoder, Editor

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fishing outlook

by george e. dolnack, jr.

With the trout fishing tempo picking up, anglers across the state are now flocking to their favorite waters to match wits with one of our noblest fish. In the southeast, a popular trout stream with many anglers is Valley Creek which originates in Chester Valley's Bacton Hill.

The limestone found in its headwaters is diluted by spring-fed tributaries as it courses through nine miles of Chester County's Great Valley. It joins the Schuylkill River in Montgomery County near Washington's headquarters at Valley Forge.

Almost 200 years ago, three thousand men died at Valley Forge. They succumbed to sickness, starvation and privation over a six-month period during the cold winter of 1777-1778 in the rolling hills of one of the state's most historic area.

Just a year after Washington's famous Christmas night crossing of the Delaware River to steal back Trenton from the British, he brought some 11,000 weary and beaten troops to the ill-fated winter encampment after defeats at the battles of Brandywine and Germantown. Washington's choice of Valley Forge for an encampment was no accident. It was selected because of its strategic location.

Laid out by a young Frenchman, Valley Forge gave the ragtag army excellent surveillance of the western approaches to Philadelphia 20 miles to the east.

Several of the camp's forts controlled the route to Philadelphia where General Howe and his troops were comfortably settled for the winter. It also provided an unrestricted view of the Great Valley. In addition, the site commanded a view of the roads to the north and also the Schuylkill River which flowed through Philadelphia.

Washington's soldiers lived in small primitive huts with crude wooden bunks, matching tables, and a smoky



Sam Dinenna fishes historic Valley Creek at the picturesque Knox covered bridge.

fireplace. They were short of everything except courage. Tents were cut up to make clothing.

The fishing was negligible during this time of year and any animal or bird that came into or near camp was soon killed for food. There was no forage for the horses and they, too, starved with the men. Yet, the troops would not eat the dead mounts.

Like the legendary Phoenix that rose out of the ashes, the survivors became a well-disciplined fighting force under the drilling of Baron Von Steuben. On June 19, 1778, the force broke camp, pursued the British across New Jersey and ultimately defeated them in a bitter battle of Monmouth.

Today, in the dogwood crowned limestone hills, Washington's headquarters and those of his staff have

been restored. Cannons and 30 replicas of huts used by the soldiers during their stay at Valley Forge dot the landscape. A rifle pit, barriers, strongholds and other buildings have also been restored to depict the camp as it was during that hard winter. Monuments and memorials dedicated to the troops are also scattered throughout Valley Forge Park.

The Mount Joy observation tower gives a breathtaking view of the surrounding countryside and the Knox covered bridge that spans Valley Creek which was the western boundary of the Valley Forge encampment.

No fortifications were located on this line because the rugged terrain and the stream provided an excellent natural defense. To attack Washington and his troops, the Redcoats would have to ford Valley Creek, then

climb the steep, thickly forested hills that rose abruptly from the water.

At one time, Valley Creek was considered to be one of the best trout streams in Chester County. However, flooding and extensive development in the 1960s caused heavy siltation which put an end to aquatic insect reproduction. Later, the Route 202 Bypass construction — which cut through the watershed — also made its contribution to the stream's degradation.

New ground cover has now stabilized the siltation by controlling the runoff and tougher pollution laws have done much to bring the stream back. The Chester Valley Sportsmen's Club is also hard at work on the creek. They have built numerous stone and gabion deflectors, three jack dams and fence ladders.

Valley Creek receives a preseason and inseason stocking of brown and rainbow trout by the Fish Commission. This year, the Chester Valley Sportsmen's Club, a participant in the Fish Commission's trout CO-OP

nursery program, will also stock the stream.

Ray Bednarchik, Chester County's Waterways Patrolman, said that a recent electroshocking survey indicated not only a good carryover of trout, but also natural reproduction of brown trout on the lower portion. He said that there is also a good supply of aquatic insect life on the stretch from Chesterbrook Farms to Valley Forge.

Many anglers fish Valley Creek during the early part of the season, but the pressure tapers off as the weather warms.

In recent years, brown trout up to 24-inches long have been taken from Valley Creek. Trout that have left the mainstream are also taken from some of its tributaries.

The usual appetizers such as salmon eggs, worms and minnows rate high with the bait fishermen. March Brown wets and Muddler Minnows work well for the spring fly fisherman. During the summer months, dark Midges in a size 20 do well.

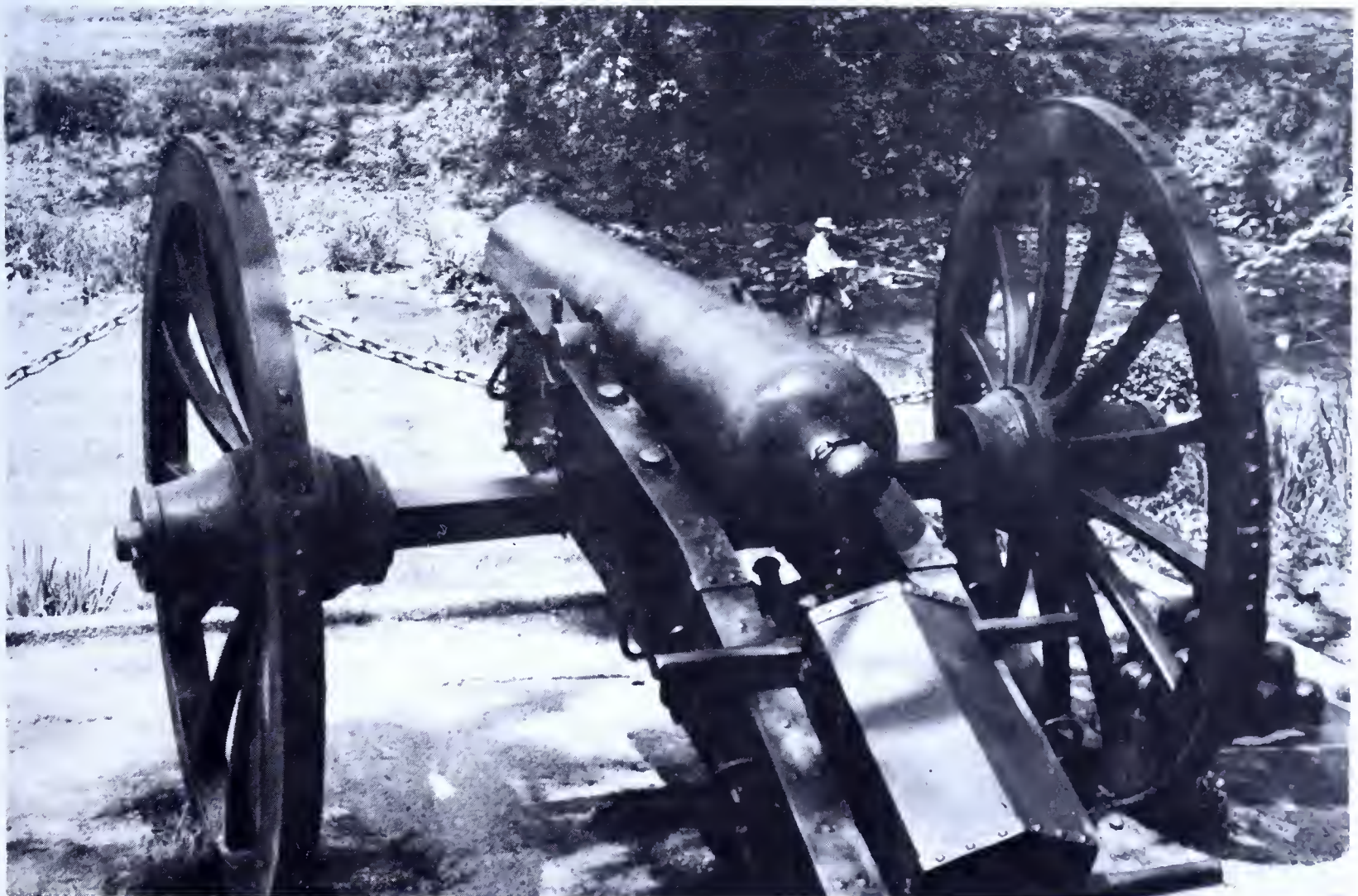
A good starting place for the angler is the Wilson Road bridge. It can be reached by turning off Yellow Springs Road on to the first road to the left just beyond the Knox covered bridge as you leave the park. There are some nice holes from the bridge down through the park and upstream to Chesterbrook Farms.

Besides trout, Valley Creek has a friendly population of suckers that are fished for by some anglers. An old dam, not far from Route 23, obstructs the upstream passage of other species from the Schuylkill River. The dam's tailrace and backwater provides lots of fishing activity.

Valley Creek can be reached from Route 23 at Valley Forge by taking Route 252, which parallels the stream, south. Limited parking is available along Route 252 between Route 23 and the Knox covered bridge.

The creek is also accessible from Route 202 by getting off at the Devon exit and taking Route 252, which leads to the covered bridge, north.

Angler Bill Reese, in the distance, fishes contentedly within sight of a long-silenced revolutionary cannon.





MISSED THE BOAT . . . WHOOPS!

Here is another one of those "Here we go again" letters, as you call them. I just read Cliff Samick's letter and agree with him 100% and more. I just went through the Angler and took a count, out of the 32 pages in the March issue, I only read 20.

I don't care for the boating articles, or the cold water news, or the article on leader knots, etc., but what really turns me off is the Fly Tying articles. I could see maybe one or two a year but not every month of every year.

A person that is interested in this can buy a good book that has everything he wants to know right there.

Your best feature is the *Angler's Notebook*, enlarge it.

BOB STRONG
Altoona

"Fly Tying" appears (as a regular column) only eight times a year. Occasionally, a "guest columnist" gives us his special version of a new fly; but, even at that it doesn't seem that two pages a month for the fly fishermen are too much. We'll bet they don't think so!

You really should go back and read the "cold water news," as you called it — it might save your life someday. Ed.

APPRECIATIVE—

I am a relative newcomer to the ranks of *Pennsylvania Angler* subscribers, although I've been purchasing the magazine at local newsstands for the past two years, and I'm taking this opportunity to express my deep appreciation for the fantastic job that everyone connected with the Pennsylvania Fish Commission is doing. I particularly enjoy the magazine.

Mr. Abele's timely, sometimes hard-hitting, always informative and thought-provoking editorials are especially enjoyed.

It is difficult to single out any one section as the best but congratulations are in order for Mr. Gettig and his outstanding photography. Your February, 1976 issue contained an article which I must comment on. "The Pioneer Tannery," by Wilbert Nathan Savage, was superbly well-written and well-presented. To ask you to keep up the good work — throughout the state in all field efforts and in the contents

of the magazine would be presumptuous on my part because I feel you are totally incapable of doing less.

Once again, my sincere thanks to all in the Pennsylvania Fish Commission.

JOHN P. BERGEVIN
Dallas

Well, GOLLEE!! On behalf of everyone in the Fish Commission family, Thank YOU, John. Ed.

HAPPENS EVERY TIME!

Casually, I turned to the small corner in our local *Daily Intellegencer* devoted to the great outdoors. The headline read, "Fisherman Lose Creek" — this couldn't effect me. But yes, this time it does. The low-life degenerates who pass themselves off as fishermen have gone too far. A stream with memories of my youth, clear-flowing Cooks Creek is no more. I learned to fish here when I was 9 and now a few careless bums have killed by litter and disregard the finest trout stream in Bucks County. I don't blame the landowners one bit for closing the stream to fishing. Also, hats off to the Bucks County Trout Unlimited for their valiant effort to clean the stream and try to reason with landowners. It's as if I had lost a loved one — very near and dear to my angler's heart. God help the next meathead I see foolishly discard rubbish and spoil something for me or my fellow sportsman!

JOE MANDUKE
Doylestown

NOT FAR AWAY!

Over the past several years, fishing has become my favorite outdoor sport, and it takes little or no excuse for me to drop everything and head out to a stream or lake. But, as many anglers who live in the Philadelphia area will attest, there were not too many streams (and fewer lakes) that provided good sport fishing in this area.

But, in just the past year, the Pennsylvania Fish Commission has given us the newly opened Nockamixon Lake in Bucks County. Nockamixon offers some very hefty bass, pickerel and the challenging muskies, all in the confines of a beautiful state park. Then I find out through an article by Philadelphia's District Waterways Patrolman, Frank Schilling, that the Schuylkill River — which runs right through the heart of the city — is harboring a variety of gamefish which most anglers in this area didn't seem to know was available!

This is a welcomed opportunity for area fisherman to get in on some good sport fishing without having to make two- and three-hour drives to reach good fishing.

Hats off to the Pennsylvania Fish Commission for their continuing efforts to provide good fishing in all of the state.

GUS WIDMAIER
Philadelphia

Hold it, Gus! Let's give credit where it's due. Pennsylvania's Department of Environmental Resources gave you the lake and the park; the Fish Commission provided the fish. How's that for a public-serving interdepartmental effort? It's been going on all over the state for years! Ed.

LOOKING UP!

Just a note of thanks for such a fine magazine as the Angler. Also, I would like to thank the Pennsylvania Fish Commission for the fantastic way they have improved the Monongahela River and other creeks and streams in the area over the past few years.

Fishing here is really good for bass, musky, panfish and catfish. Really, it is hard to believe until you've tried it. Also a special thanks to Waterways Patrolman Gary Deiger for all the help he's been, and for introducing me to the Angler. Keep up the good work!

JIM WEST
Rices Landing

P.S. Greene County fishing is the greatest!

IT WORKS!

Reading the January, 1976 *Pennsylvania Angler*, I became interested in Loring D. Wilson's article on a special pen for fly fishermen and how to make it.

I decided to make one and it was so simple I made 15 of them and gave some to my fly fishing friends; also, to the ones who only fish salmon eggs and corn.

I gave one to my doctor, Joe Tomlin. He said, "Thanks for the Pen." I said, "It is no *pen* it's a vise to hold your flies, as I know he fishes only flies. I explained to him to tie a string or piece of nylon to the clip and the other end to your buttonhole of your fishing jacket or shirt so you cannot drop it in the water while fishing.

Thanks to Loring D. Wilson and also the *Pennsylvania Angler* for publishing a worthy article for the fisherman.

HARRY SALAMEY
Shenandoah

"HELP WANTED"

I am 12 years old and love to fish. I have subscribed to the Angler to fish better (I think the Angler is great), but I haven't had any success in the 7 years I've fished. The only things caught have been, once in a great while, a 3- or 5-inch sunfish. I did

catch a 10-inch bass once. My Dad and I are so frustrated, we read and hear about people catching nice fish but we just can't! What could you suggest or tell me? Please write back.

Yours Sportsmanlike

PAUL A. DADAMIO
304 Harvard Blvd.
Lincoln Park
Reading

We're very sorry to learn that you're having such a difficult time catching fish, Paul. But — don't feel bad — many of us have days when nothing seems to work!

There is nothing quite as helpful, perhaps, as fishing with a good fisherman — one who will take you with the intention of showing you how it's done . . . and to places noted for good fishing. Possibly your dad can search out just such a fisherman for a "guide." But, knowing our readers as we do, we wouldn't be the least bit surprised if someone volunteers to do just those things mentioned above!

Meanwhile, we've already sent you a copy of "Fishing in Pennsylvania," written by Waterways Patrolman James Valentine. He's an expert fisherman and a fine writer. If you will read the book thoroughly and then apply those principles on your next fishing trip we're certain that your "luck" will take a turn for the better. Ed.

WHERE'BOUITS?

I was looking over "The Annual Report of the Pennsylvania Fish Commission" in the center section of the January '76 Pennsylvania Angler.

One thing that really caught my eye in this interesting article was the 41,549,213 walleye stocked during Fiscal Year July 1, 1974 to June 30, 1975.

Where were all of them stocked? My dad and I have searched our area of the Commonwealth, finding a few fair holes and only two (2) good ones (Raystown Dam near Huntingdon and Marburg Lake near York) which are pretty far to drive from where we live.

Tell me were any stocked in Lebanon County or nearby regions? If so, how many and where (what lake, stream, etc.)? If not, why?

Also, speaking of Lebanon County, I have heard rumors of walleye in Memorial Lake (State Park). But, I have never seen any caught. Are there really some in there?

Would you please send this information to me. I would highly appreciate it. Thank you!

MICHAEL C. HAZEL
Grantville

Dear Mr. Hazel:

Your letter concerning walleye stocking has been referred to this office for reply.

Memorial Lake, Lebanon County, was last stocked with walleye in 1966. We did not net any walleye during a 1971 survey there, but that does not mean that there were none present.

Some of the walleye water areas nearer to you than Raystown Lake are: the Susquehanna River from the Dock Street Dam in Harrisburg downstream to the area around Falmouth; Speedwell Forge Lake, Lancaster County (Rt. 501 near Brickerville); Marsh Creek Lake, Chester County (about 5 mi. north of Downingtown, just south of the turnpike); Gifford Pinchot State Park Lake, York County; and, Little Buffalo Lake, Perry County (near Newport). Additional areas are: the North Branch of the Susquehanna River from Sunbury upstream to Bloomsburg; and, Hopewell Lake, Berks County (French Creek State Park).

Of the waters listed above, the only ones stocked during fiscal year 1974-75 were Hopewell Lake (300 adults), Marsh Creek Lake (4,140,000 fry), and Little Buffalo Lake (400 fingerling).

Information obtained from biological surveys established the desirability of stocking walleye in any water area, and assists in determining the sizes and numbers appropriate, and, the frequency of stocking. Naturally, not all water areas are biologically or chemically suitable for walleye stocking and/or maintenance, so we won't stock them all. Undoubtedly, there is much walleye fishing "going begging" in this state, except for those few fishermen who, like yourself, are knowledgeable enough to catch them.

We thank you for writing and hope we have answered your questions satisfactorily.

Sincerely,

Clark N. Shiffer
Aquatic Biologist
Bellefonte

"LUCKY," INDEED!

The first day of trout season, a few years ago, a friend of mine and I went fishing on Tionesta Creek. This creek got a lot of fishing pressure early in the year so we had plenty of company.

We started fishing in an area approximately 40- to 60-yards-wide and up to 5-feet-deep. Then my fishing partner, Lewis Tuccarello, and I separated, with me going down stream approximately one-quarter mile. As usual, Lew had on his

"lucky" fishing hat with his license pinned to it. He wished me luck as I went on my way.

I had been fishing knee-deep for almost two hours when I felt something bumping into my leg. At first I thought it was a fish and ignored it; but then I looked down and saw a hat very similar to Lew's "lucky" hat. I picked it up and put it in my jacket so that it wouldn't litter the water, or get into anyone else's way. At this time I didn't see a license on the hat, and since Lew was so far upstream, had not even thought about the hat belonging to him.

All of a sudden I felt the bumping around my knee and looked down to see the "hat" again swirling around. Once more I put it under my jacket, this time securely, now realizing it was actually Lew's hat.

Later in the afternoon when I met Lew you can imagine his surprise when he saw me with his hat. It had fallen off his head when he was casting. The odds against me finding it after going one-quarter mile down a stream, around a curve, past hundreds of other fishermen, and not getting caught on some rock, or branch, or hook for that matter, must be fantastic. I still, to this day, marvel over that first day of trout season.

By the way, we both got our limit that day!

SAM PETRILL
Jeannette

SECRET'S OUT, NOW!

Why is it that no one ever speaks of Canonsburg Dam in Washington County. To me it's one of the prettiest lakes and very good fishing spots. It has lots of parking, a bait stand with all kinds of bait and tackle. The fish are fair size no matter whether they are bluegill, crappie, channel cats, carp, suckers and trout. Sometime you'll even latch onto a bass.

It's very handy for Washington and Allegheny County residents. It's just the kind of place you go when you want to be alone. The stream leading into dam is a very good stream with lots of trout and even farther up out of state water, it is very good in the spring. I don't recommend fishing for suckers before April 17th because too many trout are caught. But below the dam . . . go there and fish because most fish that go over the dam will die anyway because $\frac{1}{4}$ mile down it is very polluted with acid and sulphur. This dam also has very clean rest rooms so give it a try this year and enjoy.

RAYMOND C. ZETHNER
Heidelberg

Taking A Closer Look

by Tom Fegely

DELAWARE SHAD TIME

SHAD! The word alone rings magic in the ears of thousands of Pennsylvania anglers at this time of the year. Like autumn coho fishing in the opposite corner of the state, shad angling is growing phenomenally as each year's run lures more and more enthusiasts to the Delaware River.

Back in early March, the American or White Shad began schooling in the waters of the Delaware Bay, preparing for the run which by mid-May will take them upriver into Pennsylvania/New York waters. It was the first part of this trip, from the bay up to tide-water at Trenton Falls, that almost spelled doom to the recent ancestors of these silver-scaled fish. Here the Delaware's pollution and oxygen content is traditionally at its worst, although somewhat improved over conditions that existed 25 years back. One record shows that only 22 shad were taken above Trenton in 1950. In 1975 I saw that many taken in a four-hour period at the Lackawaxen Pool. But even this comparison is only a relative one.

During the 1700s, native Indians trapped as many as a thousand shad per day during the peak runs. Using more advanced techniques, com-

mercial fishermen of the late 1800s took as many as 50-million pounds of these anadromous fishes annually. The 1897 Report of the Board Of Fish Commissioners to Pennsylvania Governor Daniel Hastings stated "More than 5,000,000 American shad were taken from the Delaware River between the Delaware Bay and New York State last year. Fully as many, if not more, were taken this year."

Although the American shad, *Alosa sapidissima* scientifically, is sometimes referred to as the "poor man's salmon," it does not die after its first spawning run as the salmon does. Delaware River biologists, through scale samples, have determined that most shad begin spawning in their fourth year of life although a few start in their third. Fish between five and eight years of age have also been captured during the spawning run.

By the first of April the males, or "buck shad," have moved to the area above Trenton Falls in Bucks County. Studies show that it is *water temperature* rather than the time of year, however, that dictates the shads' movements. As the water approaches 40° the fish move steadily upriver, moving along at about six miles per day. It takes another month and a half for the fish to reach their main spawning grounds in the border waters of Pennsylvania and New York. Here both the buck and roe (female) shad meet and mating takes place.

The reproduction technique of the shad is fast and brief and usually takes place after dark. In a flurry of activity both fish swim side by side near the surface, sperm and eggs intermixing as they flow from the fishes' bodies into the swift current. The chore of nest-building is relinquished and the nonadhesive eggs, 30- to 150-thousand or more per female, are indiscriminately shed and abandoned.

The fertilized eggs sink slowly, all the while swelling with water and drifting along with the current. At 60° they hatch in a week's time. Less than one-half inch long, the baby shad survive on their yolk sacs which are absorbed in two or three weeks' time. By fall they have attained fingerling sizes of three to five inches. Now they move instinctively toward the sea.

Just as important as the quality of the *spring* waters in the harbor is the condition of the water in the *fall*. The

young shad need more oxygen than is commonly contained in most eastern harbor waters; and, heavy pollution combined with low water levels could easily spell doom to many. In turn, the shad run four years hence would "mysteriously" decline.

One of the unsolved puzzles of the shad's life history is its feeding habits. In the four to seven years a shad lives in the ocean, it follows the currents offering the most desirable temperatures, all the while feeding on small planktonic organisms up to an inch or so in length. It is presently thought that they cease to feed upon entering fresh water.

Why, then, do they strike artificial lures as they move upriver but not the many small organisms they encounter?

If it is merely in defense of their spawning grounds, as some researchers claim, then doesn't it also stand to reason that some minnows or other creatures would also be taken?

The time-worn question is still without an answer.

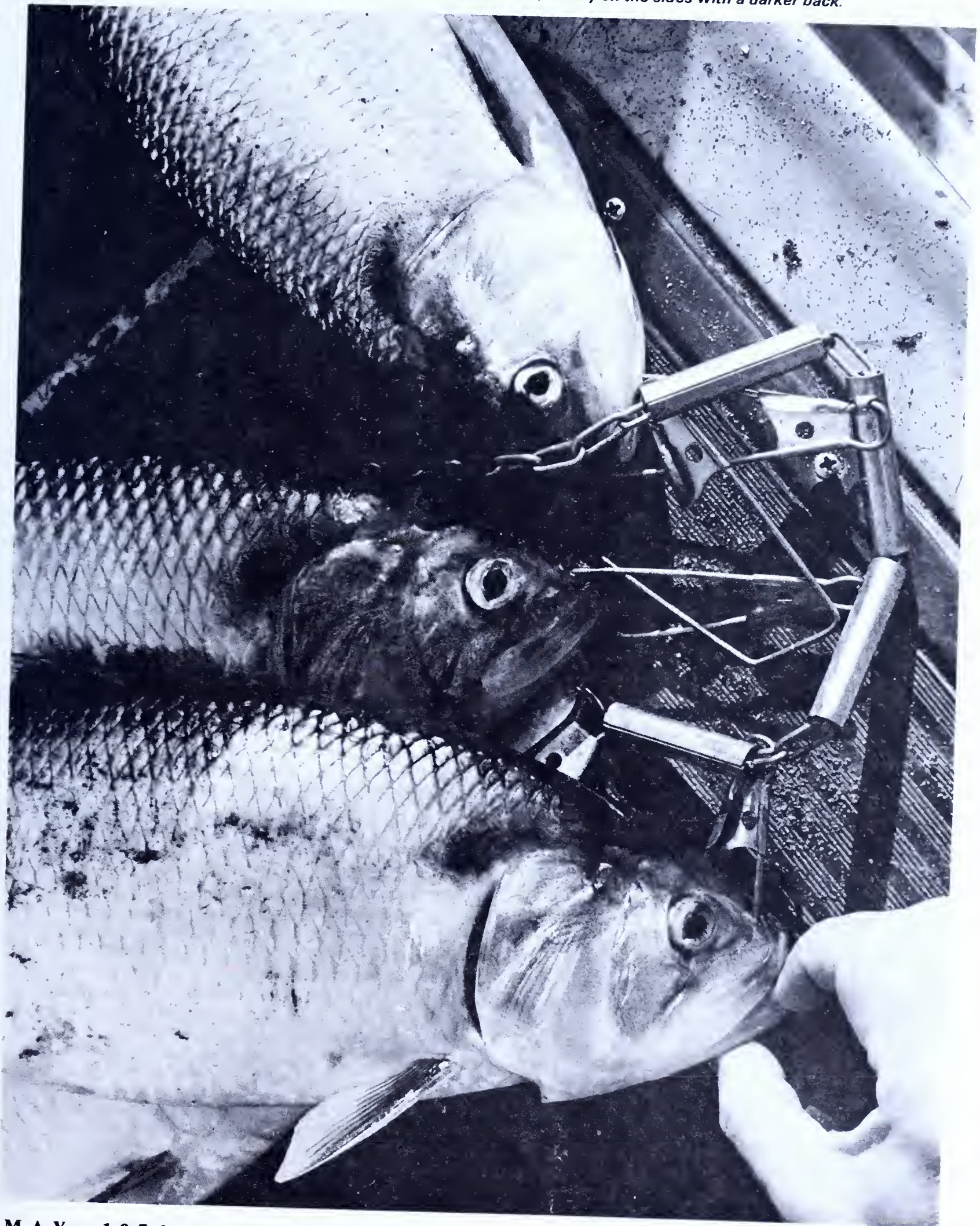
For several years, in the early 1960s, the Delaware shad runs were phenomenal. Good rainfall and spring runoffs provided enough water to overcome the "oxygen block" in the lower portions of the river and the returning shad were able to get through in increasing numbers.

Where dams have been built, however, shad runs are stopped entirely. The passage of shad into the upper reaches of the Susquehanna River is no longer possible due to the construction of the Conowingo Dam. Presently, experimental transfers of shad to points above the dam are being attempted on the Susquehanna with limited success.

Here, and in the Chesapeake Bay, the American shad shares the waters with a smaller cousin: the Hickory Shad. North of the Chesapeake, however, the "hickory" is purely a marine species.

Like the migratory urge which hastens the springtime arrival of the shad, so, too, come the anglers. Some of them are new to the sport and others are the "old pros" who can remember "way back when." But, regardless of age or experience, the sight and feel of a leaping shad on the end of your line is enough to hook you forever on this contagious pastime.

The American, or White Shad is a large-scaled fish, silvery on the sides with a darker back.



Meet the Amur Pike



by James W. Meade
Aquatic Biologist

photos by
Russell Gettig,
Staff Photographer

From 1968 through 1970 the Pennsylvania Fish Commission received several shipments of Amur pike eggs as part of a fishery trade agreement between the United States and Russia. The Amur pike is native to the Amur River which is located along the border of Russia and China. It is the only member of the pike family not previously found in Pennsylvania. Amur pike eggs were hatched and the fish reared to fingerling size at the Benner Spring Fish Research Station. From there, they were transported to Prince Gallitzin State Park and stocked in Glendale Lake. Some of these Amur pike are now fully grown and they are supplying excitement and surprises for Pennsylvania anglers. One such angler was Donald Burk, of Altoona. Here's his story of an encounter with the Amur pike:

“We were catching a lot of crappies near shore that afternoon, so I thought we'd head out nearer the point to see if anything big was moving. We must have trolled the point for about fifteen minutes, and we got a little farther out than I had intended to be. That's when it hit.

“It stayed deep . . . you could tell it was heavy. We started drifting toward shore, the same direction the

fish was headed, so I didn't think it was going to be any problem working the fish close to the boat. I gave the rod to my boy, as I always do when he's along. I wanted to drift into shore and land the fish there, because I thought our net might be too small to handle this one.

“Ryan, my six-year-old son, was working the fish when it came time to get the line around behind the boat, but we were getting closer to shore than the fish was. My son had done this sort of thing before. He got up and moved the line to a position behind the motor. When he did, a wave rocked the boat and he dipped his rod, allowing a lot of slack in the line. I started raising a little cane with him.

“‘You know better than that.’

“‘I know, but I slipped.’

“I didn't think too much of it. After the rod cleared the back of the boat, Ryan got situated in the middle seat. No sooner had he sat down when the rod bent right over the side of the boat, and Ryan's arms started shaking.

“I thought out loud, ‘Ryan, get your rod up!’ I still wasn't real anxious.

“He said, ‘I have it, but I can't pull it up.’

“‘Awe come on,’ I said, just teasing him.

"No reply.

"So I said, 'Give me the rod.'

"I took the rod and went to reset the hook; but the rod stayed down as if it were hooked onto a barbell. I wasn't about to horse this one up. I began to realize that this wasn't just another big fish.

"Well, I just started working him up and working him up. I got him up twice; both times he went right back down. The first time I got him up that we could see him . . . my, oh my, oh my, oh my; he was an awful big fish . . . over three feet long anyway! I didn't know what he was. At first I thought he was a musky, or possibly a great northern — but he was bright silver on the sides. The second time I brought him to the top and looked again I thought, 'Oh man!' My hands were beginning to get shaky and I looked at my wife.

"Now my wife had never really landed a fish. When she came along we'd usually fish for crappies. She'd catch a lot of small ones and just land them by hand. By this time my wife was getting the net ready. I looked at the net and then at her and thought, 'This isn't gonna work!' That's when I told her, 'Rather than do that, I think we'll just drift into shore and land it in there . . . I think my chances will be

better.'

"Well, I kept working the fish up and watching the plug. The first time I brought him up he had the plug down — it was deep in his throat. The second time I brought him up it was sticking about halfway out. The third time I brought him up the plug was out of his mouth and I had him by just two hooks, and they were right on the edge of the mouth!

"I knew then that I'd never make it to shore to land him — that was out. He was getting away fast and I'd be lucky to land him at all. I had him in pretty close to the boat so I told my wife to go ahead and get the net out. 'We might as well try it, because we're gonna lose him anyway, I'll never get'em to shore.'

"My wife got the net out and over the side. She was ready as I brought the fish over the net. First crack she put the net under the middle of the fish and started to lift. She must have hit it just right, exactly in the middle, because somehow that huge fish was in that net, or at least most of it was. The only problem was that then she couldn't lift the net out of the water!

"I threw the rod down and grabbed the net by the rim. The fish was just starting to float out, and the plug had come completely loose and was out. I

gave a heave, up and in. He sort of folded in the middle with the tail and head sticking out of the net, almost touching each other. He was in the boat, and I knew I was just lucky that he was.

"He didn't move at all for a moment. The strange-looking giant just laid motionless, stuffed U-shaped in the net. Then he went wild . . . thrashing and trying to lunge. He came around and hit my wife, who had been standing right beside me. He knocked her across the seat and she ended up flat on the floor! I was holding on to the net and trying to keep him in as well as I could because not only my wife, but two tackle boxes were on the floor and another was on the seat between them . . . I couldn't put him down or he would have torn up everything.

"I just held on until he finally slowed down. After he did, I ended up holding him through the gills, with my hand about waist level and supporting most of his weight with my outstretched leg. In this position I leaned over the back seat and steered the boat to shore.

"Once we got to a landing we laid the fish out on the grass and stared in amazement. He measured 41¾ inches and weighed over 15 pounds. The

That's Donald Burk doing what he likes best — and does very well — trolling Glendale Lake for Amur Pike!





The angler can pursue almost every species of warmwater game fish and panfish in Glendale Lake's 1640 acres.

glistening bright silvery sides with black spots accentuated a large girth. The angry-looking eyes and duckbill-shaped mouth, with rows of razor-sharp teeth, told us this was a member of the pike family. But exactly what it was, we didn't know . . . nothing we'd seen before looked like that."

That's about the way Altoona fisherman Donald Burk described his fishing experience of June 15, 1975, on Glendale Lake. That day Mr. Burk landed the largest Amur pike yet taken in Pennsylvania; possibly the largest in the world taken on hook and line. This was the fifth Amur (some sublegal) landed by Mr. Burk. And, more recently, Mr. Burk's son landed another near-record Amur, only slightly smaller than his dad's at 39 inches and 12¼ lbs.

The Amur pike, scientifically known as *Esox reicherti*, is a relative of the northern pike. It is native

only to the Amur River basin in southeastern Russia and northern Manchuria. In 1968, 1969 and 1970 Amur pike eggs were flown here from Russia as part of an international fishery trade agreement. The eggs were hatched and reared both at the Benner Spring Fish Research Station and at the Union City Fish Hatchery.

Amur fingerlings were stocked in a four-acre hatchery pond at Benner Spring. Those fish were allowed to grow to maturity and eventually became Pennsylvania's source of brood Amur pike. Each spring, ripe (sexually mature) Amurs are netted from the pond and spawned. The offspring are used for research and for stocking Glendale Lake, in Prince Gallitzin State Park, Cambria County.

Research includes a program in which Amur pike have been hybridized with all other members of the pike family. The hybridization program was carried out in order to

complete the study of hybridization within the pike family, most of which had been done in the early 1960s by Pennsylvania Fish Commission biologists. All possible hybrids between the Amur pike and the other members of the pike family have been made. The muskellunge cross and the northern pike both seemed to be exceptionally fast growing and hearty varieties. Specimens of all hybrids have been sent to Dr. E. J. Crossman, a prominent fish taxonomist of the Royal Ontario Museum, for further study.

Extra Amur pike x northern pike (read that, Amur pike "times" northern pike) and Amur pike x muskellunge hybrids from the study were stocked in Glendale Lake. Also, in the spring of 1975, when for some reason there was a lack of ripe Amur pike eggs at Benner Spring, additional hybrids were produced using sperm from Amur males and eggs from northern

pike females. These hybrids were stocked into Glendale Lake to replace the normal complement of Amur pike which were to have been stocked there. However, the stocking of Amur pike hybrids in Glendale Lake has caused a problem of identification. The hybrids are at times mistaken for pickerel, northern pike, muskellunge or straight Amurs; and, they are mistaken not only by fishermen, but by many Pennsylvania Fish Commission officials as well! Because of the identification problem, samples of both the Amur pike x northern pike and the Amur pike x muskellunge hybrids are now being reared to maturity at Benner Spring. Any distinguishing characteristics of the adult hybrids will be described, and specimens will be photographed and preserved. Information will then be made available at Prince Gallitzin State Park and elsewhere as to the identification of these pikes.

Glendale Lake was chosen as the site for the experimental release of Amur pike primarily because of a pollution block below the impoundment. The pollution block, within which no higher aquatic life could survive, eliminates the possibility of escape. It was expected that the lake would handle Amur pike since it already supported a large population of northern pike. Glendale had moderate-to-heavy fishing pressure which was expected to turn up legal-sized specimens of Amurs once they were present.

With the stocking of Amur pike in Glendale Lake, Pennsylvania has become the only place in the world where fishermen are able to fish for all members of the pike family. The pike family is comprised of the muskellunge, the northern pike, the Amur pike, the chain pickerel and the redbfin and grass pickerels. And, in addition, the tiger musky (northern pike x muskellunge) and Amur hybrids are available to fishermen in Pennsylvania.

Even though the Burks may be the most successful Amur pike fishermen that we know of, they certainly aren't the only ones catching these fish. Prince Gallitzin State Park Superintendent, Stan Rohrbach, estimates that one Amur pike is caught for every four northern pike taken; and, while

Glendale Lake is known as a *super* bass lake, the northern fishing isn't bad at all. Pennsylvania Fish Commission Assistant Regional Supervisor (Enforcement Division) Tony Murawski reported that Amur pike up to 38-inches were taken from Glendale Lake as early as 1973.

Possibly the greatest rate of returns of Amur pike to the Angler has been through the ice. Waterways Patrolman Walter Rosser reported that one group of ice fishermen took 11 legal Amur pike in a two-week period. Legal size is 24-inches minimum length, the same as northerns. Waterways Patrolman Robert Kish reported that last winter ice fishermen continued to harvest Amur pike.

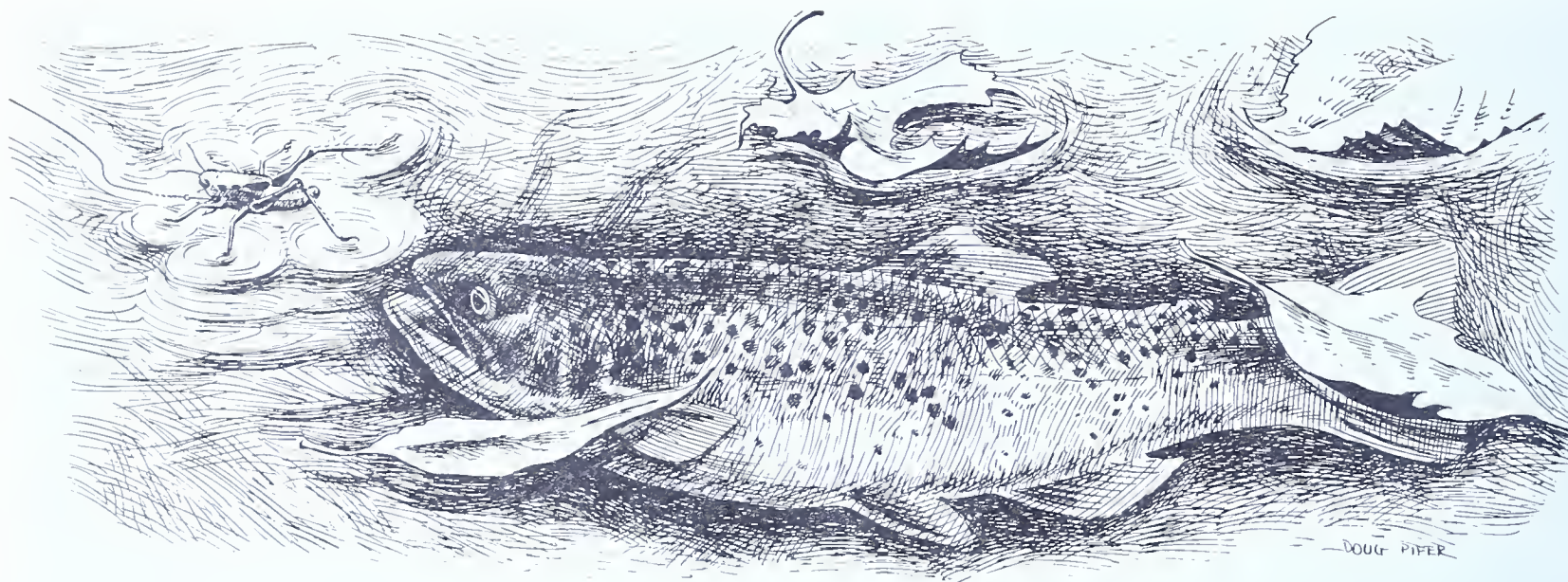
The recent catches of large Amur pike are especially exciting in light of

the Russian scientific literature which lists the maximum length of Amur pike as 110 centimeters, or about 43.3 inches. From this, it would not be unreasonable to believe that the world's record Amur pike might just be living and feeding in Glendale Lake right now!

For those fishermen who have the skill, patience and good fortune to hook into and land an Amur pike, we request that you report your catch to the local waterways patrolman or the park office. And, for any and all Pennsylvania fishermen who might be looking for a little excitement and something different, we suggest that you consider a trip to Glendale Lake, Cambria County, and introduce yourself to that mighty Russian, the Amur pike.

A waterways patrolman stocks the distinctly marked Amur Pike in Glendale Lake.





Fishing the REAL Trout Bugs by Theodore E. Kiffer

Ray Bergman, the late dean of American trout writers, stressed two points in his fascinating and helpful articles on trout fishing. The first was the absolute necessity of natural drift regardless of the bait or fly used, and the second was the necessity of having the appropriate bait or fly required by the existing conditions. His articles on drift and the meticulous descriptions of trout rejecting flies that dragged ever so slightly because of imperceptible surface currents are required reading for any serious trout fisherman, especially a purist who limits his lures to fur and feather artificials.

Even though Ray Bergman expressed many times his preference for taking trout with flies, he was not a purist in the narrow sense of the word. He readily admitted that there were times and conditions when artificials would not produce. On those occasions, especially when he wanted a few trout for the table, he turned to what he called: "*The Real Trout Bugs*." His reasoning was very simple, yet absolutely flawless: a husky trout requires a great amount of food; and, in the late spring and early summer feeds almost continuously. Inspection of a trout's stomach content will show an amazing range of food particles: minnows, crayfish, beetles, worms, hemlock needles, other vegetation, and often homogenous masses of unidentifiable bugs and insects with possibly a

recognizable leg or body segment sticking out. These are the *real trout bugs*; and, any of these little creatures that fall into the water from trees and bushes, that are blown into the water by wind, or indeed are hatched in the water are readily taken by trout. Bugs aquatic and bugs terrestrial make up the bulk of the typical trout diet. Note that the word "bug" is being used rather loosely here and does include the various natural nymphs, larvae, and beetles that flourish in the water as well as various caterpillars, grubs, flies, beetles, and other insects that abound in the air and on the land.

These creatures, though considered tasty morsels by trout, are possessed of a couple of drawbacks regarding their utility as bait: they are generally small and they are typically fragile. It takes little skill to thread a six-inch worm onto a size 8 or 10 hook and heave it into a current or pool; but, presenting a common housefly, a $\frac{3}{8}$ -inch sowbug, or an immature $\frac{1}{2}$ -inch caddis nymph is an entirely different proposition. Yet baits of this kind are readily taken by trout — if the fisherman can get the bait to the feeding lane of the fish.

Many of us, like Ray Bergman, have more or less furtively clipped the hackles and dressing from a number 14 or 16 dry fly and then impaled an unfortunate bug or worm on it rather than go home skunked. Several problems are readily apparent when this

strategy is attempted: delicate larva and caterpillars are easily destroyed when the hook pierces the body, the bait often flies off at the first attempted cast, and hooking a trout is exceedingly difficult especially when the bend of the hook is filled with the bait.

To successfully fish the small naturals, an improved delivery system is required. During the past three seasons I have slowly evolved such a system; and, though I still prefer to use artificial flies, when the trout are not taking artificials and I want to catch some, I turn to the small naturals. The system has never failed. *I always catch trout.*

At the heart of this system, or perhaps at the terminus, is a number 18 treble hook. They should be delicate, made of extremely thin wire. These little hooks solve two of the aforementioned problems immediately and they are deadly. First, they are so delicate and sharp that they can pierce the tough head of a small nymph, beetle, or flying insect without destroying the shape of the bait and without permitting the body fluids to escape. Thus the natural lure retains its normal shape and appearance. Second, the extra two barbs of the little hook, looking like legs or antennae, provide a deadly hooking efficiency. Almost no strikes are missed. The very lightness of the little hook provides a further advantage, the bait

floats or drifts in a most natural fashion.

The leader must, of course, be light. A heavy leader interferes with natural drift and impedes the free floating of the baited hook to which it is affixed. For this reason, I use a 7½ foot leader tapered to 6X and then tie on an additional two feet of 6X or 7X tippet. (I must digress for a moment for I know there are many who have hauled early season trout out of murky waters with two feet of 10-pound test leader sprinkled with split-shot and number 8 hook at the end, but I am concerned about a compromise position: a sporting approach to bait fishing as well as a surefire clear water method.) Since I prefer the fly rod, I generally use my 7½-footer with a double tapered Number 5 floating line.

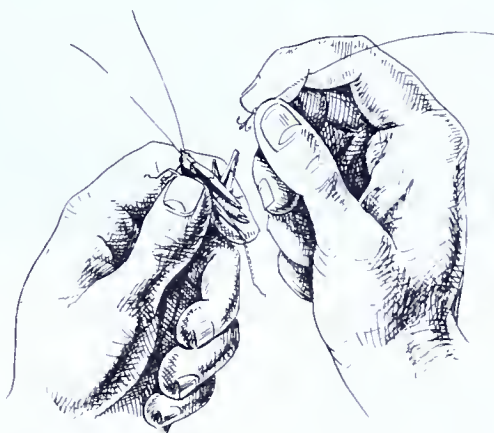
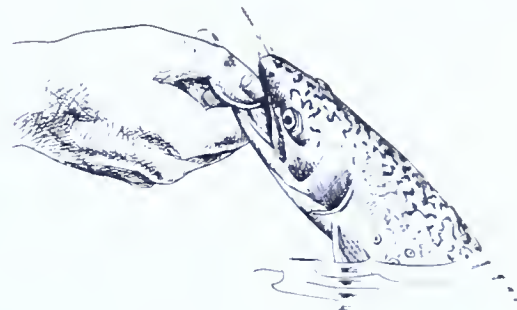
I gather my bugs by turning over rocks, logs, and clumps of leaves and picking up everything that I find. I really should learn their names, but if they live near or in a stream, they seem to work; and, that is the most important aspect. Generally speaking, those from the stream work better, but late in the season when the stream worms and nymphs have metamorphosed into flying insects and have disappeared, then the trout feed increasingly on the landbased "bugs."

After placing the bait on the hook, I gently cast upstream at about a 45° angle and then follow the progress of the bait downstream — not by straining to see the bait, but by watching the end of the floating line. The drift of the bait on the fine leader, unhindered by weight of shot or hook, is perfectly natural, and the bait floats in the current unhindered or bumps along the bottom. When a fish intercepts the drift of the bait, this action is trans-

mitted to the end of the line. Any perceptible change in the rate of movement of the line such as a hesitation, a jerk or a wiggle, signals a feeding trout. The trout take such baits most delicately . . . I have never felt a strike or bite. When that line end changes its speed of float, a slight flick of the wrist usually results in a hooked trout. And then the fun begins! The light terminal tackle demands a delicate touch in playing the fish. No horsing here.

One further benefit of fishing in this fashion is that most trout are hooked in the lips and releasing them relatively unharmed is easily accomplished if that is what one desires.

One variation of this method involves the use of a light spinning outfit and monofilament line of no more than 2-pound test. A clear plastic bubble is attached to the line above the



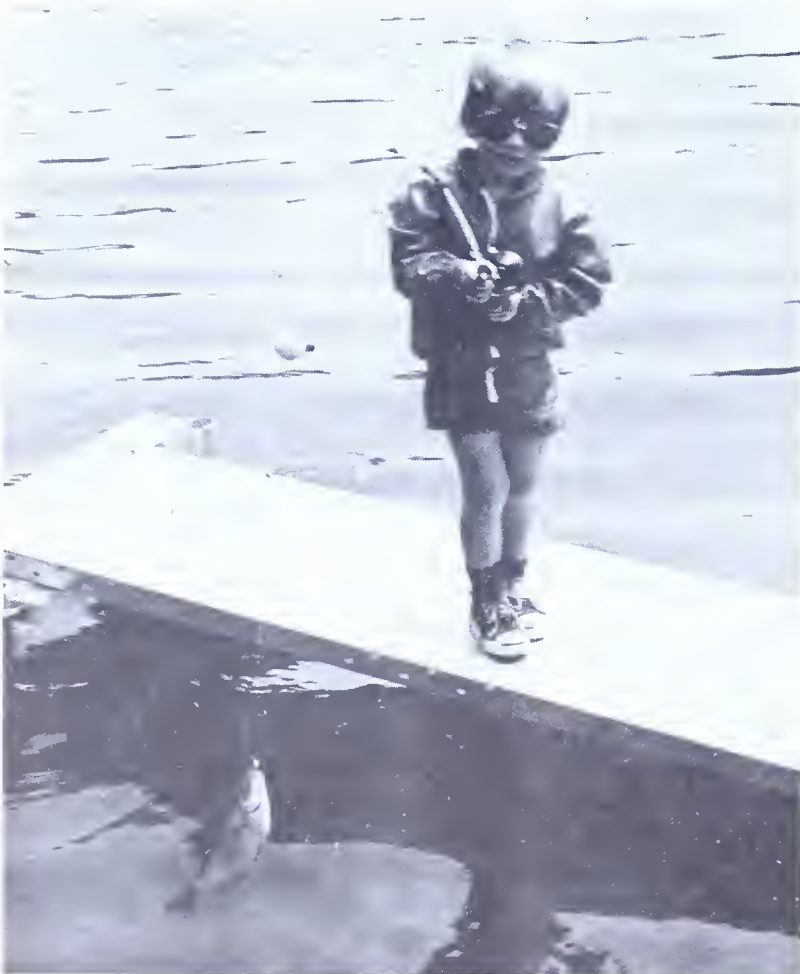
tiny treble hook. I have found that twice the water depth will give the right distance for placing the bubble. Obviously, this method works best on large, flat, open, shallow pools that are unapproachable by conventional methods. I cast upstream and then reel in the slack as the bubble floats toward me. Any hesitation, any jiggling — no matter how slight — could signal that a trout has picked up the bug. Do not wait for the bubble to disappear; strike immediately. Incidentally, this method works well with grasshoppers in the late season. The hopper floats along behind the bubble, completely unhindered by the little treble hook, kicking and swimming. Get ready for a strike! The clear bubble, used as weight to deliver the cast does not frighten the trout as would a red-and-white bobber under the same conditions.

Last summer, near the middle of June, I went to a popular stream in Huntingdon County. When I arrived around 6:30 in the evening, several fellows were leaving. They had caught nothing. I tried dry flies unsuccessfully for a while, and then tied on a new 6X tippet and one of my tiny trebles. As dusk was descending, I hurriedly gathered an assortment of caddis nymphs and some "thousand-leggers." Trout were rising in the lower end of the pool I wanted to fish, but four men were busily casting and casting dry flies to them with absolutely no success. In fact, within the two previous hours, that pool had been fished with minnows, spinners, worms, and wet and dry flies, and not one fish had been raised, let alone caught. I moved into the edge of the water at the upper end of the pool, impaled a tiny caddis nymph about ½-inch long, and false casting gently, worked out enough line to cast. I had watched the line end drift perhaps three feet when it seemed to hesitate. I flicked the rod tip and was rewarded by the solid weight of a trout. I carefully brought him to net, a chunky 12-inch brown, and creeled him. Without moving from my tracks, I caught seven more, ranging in size from 9- to 13-inches. As long as I could see the end of my white line, I could take fish. In response to queries regarding my bait, I responded, "That's a secret." The bait isn't really the secret, though. Beetles, inch worms, sowbugs, nymphs, honey bees, buck flies — these are all common enough. The secret is the tiny treble hook and the ultralight leader that lets them drift in a natural fashion. That's my "secret" to fishing *the real trout bugs*. Try it!





All it took was a little patience, a little coaching, and our man in the dark glasses landed his first fish!



Speedwell Forge Lake's
**“Sunfish
Saturday”**



Speedwell Forge's "Sunfish Saturday" was a whole day of relaxation, fishing fun, and some very tasty treats!

by Dave Landis

photos by the author

"I got one! I got one!" cried the baseball-capped youth as he cranked his reel handle furiously. His face shone with wide eyes and flashing grin. His finned prize was a sprightly bluegill of five glorious inches! Losing little time, the youngster bagged his catch and plunked his bait back into the water. "I got one!" he cried again. "I got another one!"

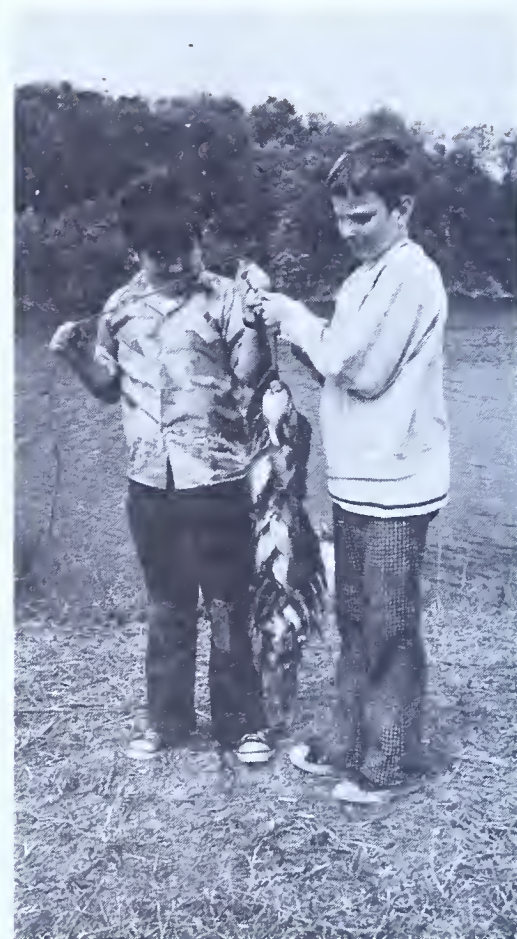
Now you wouldn't expect him to do that for *every* fish all day long, but he did. He hollered just as loudly for #20 as for #1 . . . and for #36 . . . and #48 and louder still for #50. However, poor #50 never even made it to the stringer. Instead, the poor fish dangled at rod's end as our hero grabbed the stringer with his free hand and headed flat out for the judges' booth. He was off to have his limit of "sunnies" weighed and registered.

The scene was repeated throughout the day as countless young anglers

"limited out" on plump panfish. All this excitement was for good reason. This was the day of the "First Annual Speedwell Forge Lake Panfish Derby," less formally known as "Sunfish Saturday." Registrants in the derby competed for a multitude of prizes in so many categories as to stagger the imagination. There were prizes for the largest and second largest "sunny", and "crappie". The *smallest* entry in each class also received a prize. There were honors for the *first* 50 fish taken, the *heaviest* 50 fish, and, believe it or not, the *lightest* 50 fish. Just to make sure the adults present had half a chance, there were two divisions: junior and senior.

The weather was near perfect and everyone had a grand time. There was plenty of sun and more than enough fish for everyone. In fact, the number of panfish available in Speedwell Forge Lake was overwhelming.

Speedwell is a Fish Commission-



owned lake and was stocked with gamefish and panfish around a decade ago. However, game fishing pressure was always heavy but panfishing interest had waned over the years. As the predators were harvested, the prolific panfish populations skyrocketed. Pretty soon the lake was teeming with stunted "sunnies" and crappies. When this happens, the panfish compete with the remaining gamefish for food and breeding grounds, and a vicious cycle is in full swing.

Once the problem was recognized, a group of local sportsmen decided to lend a hand. Members of the Lititz Sportsmen's Association banded together and agreed to sponsor the derby described earlier.

Sporting goods stores and manufacturers were canvassed for support in the form of prizes. Posters were printed and the promotion was underway. As the outline for the day took shape, it became obvious how much hard work and planning had been done. The club decided on a two-point objective: First, they wanted to turn people on to the fun of fishing for panfish. Second, they hoped to prove just how delicious the little fellows were on the table. A "catchy" slogan

told the story: "Catch 'em — Keep 'em — Eat 'em!" Obviously, just telling people a 5-inch "sunny" was good to eat wasn't going to convince anyone. However, the fellows from the Lititz club were sharp. They persuaded the West Earl Lions' Club to bring their french-fry wagon and set up a concession. Anyone knows soft drinks and french fries are just the ticket at a fishing derby, but who would think to provide fresh, deep-fried panfish fillets for free? These guys covered every angle. They even set up stations and demonstrated how to fillet even the smallest fish! Demonstration fish were donated, often by fathers of young anglers with long stringers. These fish were filleted and quickly "fried up tender" at the frying wagon.

The reaction was overwhelming. People who "never ate fish" were standing in line 5-deep waiting for seconds, thirds! It worked! People had great fun catching them and they were also made aware of the fine eating panfish provide. Those who tried filleting soon saw how easy it really was.

Naturally, there is a price for such great success. Just ask the club members who were bent over the filleting

table for 3 hours at a time. After all, once the people were turned on, they kept bringing full stringers, and the fried fillets kept going.

While all this was happening, men from the Fish Commission were doing their thing too. Waterways Patrolmen were on hand to monitor the activities. Some manned an information booth, while others distributed litter bags and information packets. Lancaster County Waterways Patrolman Harry Redline was on hand with his fillet knife and a homemade "smoker." Once the crowd tasted smoked panfish, Harry had a tough time keeping the hungry mouths fed.

As the day drew to a close, there were a lot of very enlightened and happy people. Old and young, beginners and old-hands, found or rediscovered just how enjoyable the oft forgotten "little fellows" can be. Many vows were taken to come back and "catch a mess for the freezer." No one could have been happier or more tired than those who made it all happen: the men of the Lititz Sportsmen's Association. They know it will take more than one derby to balance the populations, but they made a very gallant and important first step.

Those young anglers on the opposite page helped reduce Speedwell Forge Lake's exploding panfish population by considerable numbers!

Anticipation ran high as the day's activities began, below. Young and old alike were there to share in the fun and excitement.



"Kids" of all ages lined the banks of the lake and, as usual, Speedwell's panfish cooperated — much to the delight of everyone!



Remember when cleaning the day's catch was "a man's work"? Well, look what's happened since women's lib! Really, though, we don't know if the young ladies below were volunteers or draftees!



The filleting operation, which was a prelude to a fish fry later, brought forth some very curious spectators.
"Can I touch him? Can I, huh? I never saw one this close before!"





Lancaster County Waterways Patrolman Harry Redline, above left, is about to fire up his homemade smoker for an on-the-spot demonstration. Sampling some of the smoked delicacies prepared earlier is Steve Ulsh, Education and Training Officer for the Pennsylvania Fish Commission. That look of misgiving on Steve's face has nothing to do with the fish — he's just never tasted Harry's cooking before! As the day wore on, some of the early starters, right, just wore out! Others, below, just hung in there for the balance of Speedwell's "Sunfish Saturday".



Juniata River Trout

by Gerald Almy

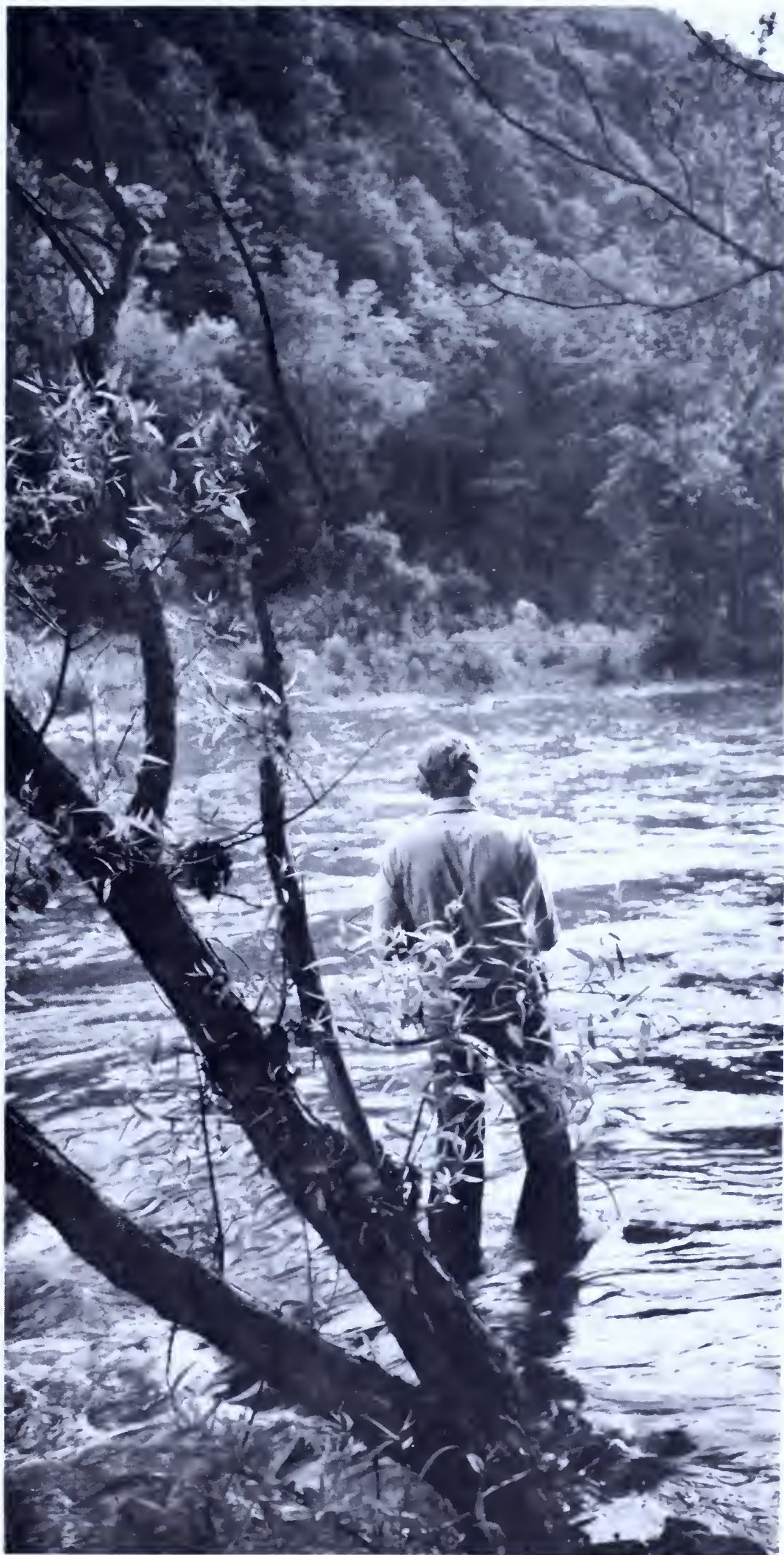
“**S**haping up to be one of the best trout streams in the country.”

The words echoed in my head that sunny afternoon as Joe Canole and I pulled up to the Commission parking area on the Juniata River in Huntingdon County. This was the description local fishing expert Ed Fochler had given the Juniata when Joe met him two weeks earlier on a business trip to Altoona.

The words were enough to lure the two of us to the stream from our homes in Arlington, Virginia — some 200 miles away! The river overwhelmed us immediately with its beauty and size. No rippling meadow brook, the Juniata is a deep, massive stream with alternating pools that sometimes measure a mile long and 60 yards across, and fast, boisterous white rapids.

Joe had his spinning gear already assembled from a previous fishing trip and his worm was greeted with a quick, passionate response from a frisky eight-inch brown. I hadn't even tied a fresh tippet to my leader and already he had a trout! The fish wasn't hooked deeply, so we decided to release it, confident that we could take enough trout before we left to supply a few tasty dinners.

Rises were already apparent on the glassy surface of the deep, lake-like pool, and delicate, snow-white mayflies soared from the water, as if fleeing from the hungry jaws of the hefty brown trout waiting to engulf



Working a swift, broad pool on the Juniata. Wading here can be tricky.

them.

I clinch-knotted a white variant to my 6X tippet and met immediate success with three takes on as many casts. Well, partial success anyway — only one of the fish actually came to net, a husky 11-incher with shiny black spots and colorful brown flanks.

I killed the fish quickly and was amazed as I cleaned it by the beauty of its pink meat. Here was a trout with flesh equal to the freshly caught salmon from Iceland's classic Laxa River, which had set my standards for salmon and trout eating at a perilously high level early in my fishing career. A diet heavy with crustaceans was indicated, though the fish's stomach was stuffed with mayfly nymphs and a few duns now.

Joe had treked up to the first riffle where he hoped to find better bait fishing, and was now out of sight. Darkness was closing in rapidly, urging me to cast with renewed energy at the steadily rising fish. Takes came

surprisingly quick for such readily accessible water. The variant matched the natural fly closely and was sipped in with confidence by most of the fish.

The only problem was getting out far enough into the water to deliver the fly without hanging up on the back-cast. Trees grow thickly along the water's edge, and the river bottom is jagged and perilously deep. I pledged to bring a johnboat next time I visited the stream so I could reach the fish rising in the middle and along the opposite shore!

Not that all the large fish were out of reach, though. By nine, when the sun had disappeared behind the nearby mountains, I was about to call it quits. One heavy rise drew my attention, however, demanding a final cast. And one cast was all it took. The fish lunged hard at the fraud, hooking himself solidly.

Here was the heavyweight I longed for! The trout veered off immediately in a headlong dash for the opposite

shore. With only a two-pound tippet, I let him have his way. Gradually I worked him in and we slung out the final rounds at close quarters. After what seemed like an eternity I had my quarry beaten. I knew he was a strong, fat trout, but little did I realize how *fat* this fish really was until I brought him into reach. It took two hands to go around this rotund fellow — 17 inches and three handsome pounds of brown trout!

Dressing the fish out in the pale beam of a weak flashlight revealed four 3-inch crayfish. This trout obviously knew how to eat. No doubt the mayflies were to be his dessert after that gourmet main course!

Joe soon came stumbling down the path in the darkness, lugging his creeled fish at his side. Nightcrawlers too, were welcome fare to the greedy fish. Two handsome 14-inch browns stared defiantly from the cord stringer. "Released three others," he remarked, with a trace of glee showing

Remnants of Agnes at the tail of a Juniata pool provide a bit of cover as well as opportunity to lose tackle!





Joe Canole drifts a nightcrawler on the Juniata River near Barree, attempting to pick up a handsome brown.

through the casual tone of his voice.

It's hard to believe that 6 years ago the Juniata in the stretch we were fishing was a stagnant waterway virtually devoid of the coldwater gamefish it was meant to nourish. At that time a paper mill upstream spewed effluent waste into the stream at an alarming rate, killing the trout, stifling insect hatches, sullyng the water, and destroying the sporting potential of this beautiful river.

It's a glowing tribute to nature's resiliency, as well as the hard work of concerned citizens, that the Juniata is now one of the best trout streams in Pennsylvania, and perhaps the country. Yet it is not overly surprising; with the paper mill now shut down, pollution from other potential sources nipped in the bud, stream improvement work in progress, a wise stocking policy, and a natural food supply that boggles the imagination.

With the overwhelming approval of area fishermen, the Juniata receives only fingerling trout to supplement the natural reproduction which occurs in the stream, when stocking time rolls around. Because of this, fish which the angler comes in contact with are either true native trout, hatched and nurtured in the stream, or fingerlings which have grown up in the river since, "infancy." In the process of growing up in the stream, the fingerlings take on virtually all the attributes of their native cousins, chief of which are exquisite colors, excellent fighting characteristics, and bright pink crayfish-fed flesh.

Mayfly and caddis hatches are consistent throughout the year, providing first class fly rodding for fish which sometimes reach monstrous proportions. One angler I spoke with took two 19-inch trout one afternoon on dry flies during the Hendrickson

hatch last spring. I hesitate to guess what those beauties must have weighed if my 17-incher tipped the scales at 3 pounds!

Yet if you look down on the edge of the Juniata in a calm stretch of water, you'll see the most astounding food supply imaginable. The bottom is literally a mass of crawling, scuttling crayfish!

The next day Joe and I collected three dozen of these deadly baits in less than 10 minutes, using a fine-meshed trout net. These lured some fine brownies for us that afternoon.

Though knowledgeable locals insist that spin-fishing with artificials is excellent on the stream, the majority of anglers Joe and I encountered on the Juniata were either bait fishermen or fly fishermen. But both types enjoyed fantastic luck during our stay, as Joe and I did using these two methods in quest of feisty Juniata browns.

Bluegill Fishing Refined

by Richard F. Williamson



Though he has a little mouth, the bluegill's big appetite is his downfall!

The rise of a feeding trout to a daintily floating dry fly, the smashing strike of a hungry bass as it attacks a darting plug, the vicious attack of a pike on a darting spoon, these are the thrills of fishing, the rewards of skilled handling of rod and lure. Yet, what angler has not thought back to the days of his boyhood when any fish was a prize? More than likely, his memories will be of *fat sunfish* caught on worm-baited hooks suspended under bobbers!

His fishing is more refined now. He uses the finest tackle and the most realistic lures. He knows the effect water temperature, light penetration, and oxygen content have on the feeding habits of fish. He knows the aquatic insects, the minnows and other natural forage in the waters he fishes, and how to imitate them with his artificial lures.

But the sunfish — or more espe-

cially the bluegill — still prowls the waters of streams, lakes and ponds, just as in the boyhood days, offering the fly rod angler an invitation to fine sport.

The bluegill is not “just another fish” for kids to catch and for grown-ups to ignore — or just tolerate. In fact, it is a close relative of the bass and can be just as pugnacious and tricky, selective in its feeding, and wary of carelessly handled tackle.

The bluegill lives everywhere: in farm ponds, farmland creeks, quiet pools and eddies of rivers, and in the shallow coves of lakes of all sizes. There it awaits the fisherman who gets fed up with long trips to diminishing, cold, fast-flowing trout waters; or, weary of handling casting and spinning outfits, plugs, spinners, spoons, and jigs.

This fish likes quiet water where it can hide and feed. Docks are a favorite haunt. Trees that overhang the water, stumps, beds of water lilies, and patches of weeds also are prime bluegill habitat.

Bluegills spawn in May and June, when the water temperature rises to about 65 degrees in the shoreline shallows. They form shallow, rounded nests in sand and fine gravel. One female can produce as many as 35,000 eggs, which hatch in three or four days. During this process the fish defend their nests fiercely, attacking anything — even a large fish — that approaches the area.

The bluegill does not always take a lure floated over its nest. At times the fish will only bump the lure with its nose, as if to drive it away. And if a bluegill is hooked on its nest and released, it will return immediately to the nest and resume its patrol.

Fly rod fishing is at its prime during the spawning period, and no angler need feel remorse over catching bluegills defending their nests. The fact is that bluegills are so prolific that unless goodly numbers of them are caught, a body of water will in time become overpopulated with stunted fish.

Bluegills move off their nests when the spawning process is completed and

take up permanent residences. Some find shelter in deep water, and others move into the weeds and lilies and other obstructions in shallow water. Then the fly rod angler has to find these new areas where he can continue his sport during the summer months.

Insects, which are the favorite food of the bluegill, are found in abundance around aquatic vegetation, in the water under overhanging trees, in areas where stumps and sunken tree limbs clog the water, and along shorelines where vegetation grows at the edge of the water.

Bluegills are daytime feeders. Those that find shelter in the shallows constantly prowl the outer edges of lily beds, channels and pockets of open water in weeds, even very small pockets of open water around stumps. During early morning and evening hours, the bluegills that make their summer homes in deeper water also move into the shallows to feed.

These are relatively small fish; but, when they are caught on very light tackle they are worthy antagonists. They dive for the protection of thick weeds or any other natural cover in the water or make fast, though short runs, around or away from the angler. They also have the habit of turning their broad, flat sides toward the angler to help them resist the tension of line and leader.

An outfit used for fishing small streams for trout is good. My own combination is a 7½-foot rod with a matching double-tapered floating line and a 9-foot leader with a 2X or 3X tippet. Accuracy is far more important than distance in casting. The angler must master the art of dropping his bluegill fly into tiny pockets of water or into narrow channels winding through the weeds, or within inches of a stump, or back under an overhanging tree or shoreline vegetation.

Bluegills will take nymphs, wet flies, and dry flies used in trout fishing. They are caught, also, on small streamer flies and on tiny spinners. But the best fly rod lures are those designed especially for bluegill fishing and that float high and dry or just under the surface of the water. The floaters usually are made of cork or plastic, and the sinkers have bodies of soft rubber. All are more effective if they have thin rubber legs extending

half an inch or so from each side, just back of the head. Orange and yellow are very effective colors, but white, red, and black and combinations of these colors also are good.

I have three favorites: One is a rubber bug, colored orange, which sinks just an inch or so under the surface. It is tied on a size 10 hook, with a body half an inch long, rounded on top and flat on the bottom. It has three white rubber legs on each side. The legs are three-quarters of an inch long.

The second is a plastic popper painted yellow, tied on a size 8 hook. The body is one-half inch long, one-fourth inch in diameter, and round. It carries four white rubber legs, an inch-long, tied just back of the head, and on the bend of the hook is a fluffy tail, made of feathers, three-quarters of an inch long.

The third is a somewhat larger popper mounted on a size 8 hook. The body is made of cork and painted yellow. The body is five-eighths of an inch long, with a slightly concave face, three-eighths of an inch in diameter and tapered, bullet-like, to the bend of the hook. The lure also has four half-inch white rubber legs and a hackle tail about an inch long.

There are scores of patterns of bluegill flies, and every angler has his own favorites. But there is one general rule that all should follow, and that is in regard to the size of the lure. The bluegill has a small mouth. It cannot handle bigger fly rod lures used in bass fishing. All it can do, as any bass fly rodder can attest, is to peck at the big lure. My own preference is for lures tied on size 8 or 10 hooks. Bluegills have been caught, however, on flies with hooks as small as size 14 and 16. Small bluegill lures, incidentally, can produce unexpected action. I have caught both chain pickerel and large-mouth bass on bluegill poppers.

The action imparted to the lure is the secret of bluegill fishing success. I can document this statement with a fascinating movie made one afternoon at the side of a dock on a small lake. The water was about four-feet-deep and clear, and the light angle was just right, and I made the film while a friend cast small rubber and cork lures over the bluegills we knew lived in the area.

My friend let the fly lie motionless

after every cast, and time after time a bluegill rose slowly and deliberately toward the lure, stopping just under it.

Several times the fish struck the motionless lure. But more often the bluegill showed no intention of feeding, although staying near the fly. Then my friend made the lure look alive, and the bluegill usually would attack it.

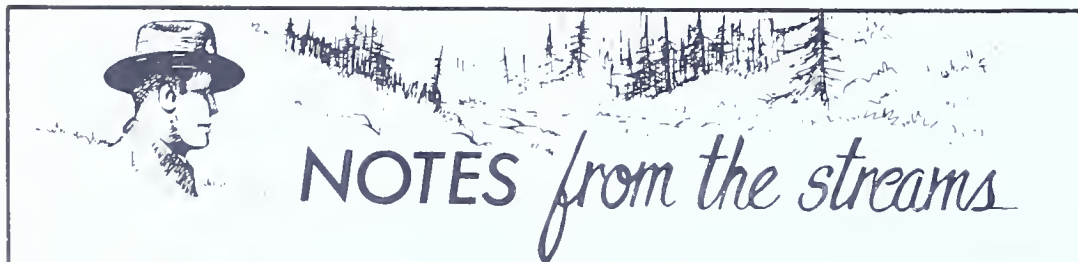
Making the lure look alive was the real trick. At times that could be done by gently shaking the rod handle, just enough to make the rubber legs wriggle. At other times the lure was made to twitch very lightly on the surface. Never was it really "popped." The soft rubber bug, floating just under the surface, sometimes triggered a strike only when it was retrieved very slowly and steadily. Now and then a bluegill would swim a considerable distance behind the sunken lure when it was retrieved at a fairly fast pace. Twice when the lure was stopped dead in the water the bluegill took it.

In every case, the bluegill swam quickly away if the floating lure was worked violently. But some distance from the open water where the movie was made was a bed of water lilies. To entice bluegills from this cover we found it necessary to twitch the floating bug gently to get a strike.

We observed another thing: Bluegills were not particularly alarmed by the activity in their water. They continued striking for half an hour in that confined area. The biggest of the lot, which we could see taking shelter in a small clump of weeds on the bottom, twice investigated lures before striking.

Most of the fish were lip-hooked and could be released unharmed, but several struck so hard that the hook was buried in the throat and the entire lure was in the mouth.

I never have been able to figure out why those bluegills were so cooperative and such willing teachers. But I show my appreciation to their species. While I practice the tactics they taught me, and find fly-rodding for bluegills as much fun as any fishing I do, 90 percent of the bluegills that take my lures are returned to the water. Only those that are deeply hooked and injured, or those needed for an occasional dinner of bluegill fillets, are killed.



DETERMINATION!

An avid, elderly Juniata County angler came into our office to show us his "prize" fishing rod, which he had just gotten from a young lad along a stream. It seems this gentleman, while fishing, came upon a young Amish lad who had conjured up his own fishing tackle — a 4' long, 1" diameter straight branch, whittled down at the end, on which he had a nail, a large thread spool, a nail on the end of the spool to turn it, string for line, and screw eye hooks along the rod for guides.

Seeing that the lad enjoyed fishing so much and enjoying his ingenuity, the gentleman asked the lad if he would sell his rod. The gentleman went home and got one of his rods, reels, lines, etc., and gave it to the boy plus \$.50 in exchange for the homemade device and stayed for a while to watch one happy young lad fish with the "real thing." This elderly gentleman then presented the homemade rod and reel to me. When I say, "gentleman" about this man, that is exactly what I mean!

*Richard Owens
Regional Supervisor
Southcentral Region*

PREPARED

About the only contact most anglers have with our Deputy Waterways Patrolmen is along our streams and lakes, while they are patrolling. I think most anglers are unaware of the interest and dedication that these men have. In Blair County we were quite concerned about the possibility of accidents that might befall the fishermen and boaters in this area. With this in mind, most of the Deputies in Blair County recently completed a twelve-hour "Basic First Aid Course" and an eight-hour "Cardiopulmonary Resuscitation Course." They put in these twenty hours on their own time with no cost to the anglers and boaters of the Commonwealth. We wanted to be ready in case you need us. I think these men are to be highly commended for their interest in learning skills, which could save a life . . . maybe yours!

*Walter A. Rosser
Waterways Patrolman
Blair County*

CONTRIBUTOR

Without a doubt Greene County has the most dedicated "fish stocker" in the state. We have an individual who religiously attends our stockings, whether it is inseason trout, adult panfish, or musky fingerlings.

This person can be counted on to lend a helping hand. I've observed this gentleman walk into cold water well above his knee boots on more than one occasion just so he could put fish into what he felt was the best location for them.

I talked with this man during our last in-season trout stocking last year and learned that he resided in Nemacolin — which is a good 60-mile round trip to Ryerson Lake where we stock most of our trout! As we completed our stocking that day, I suggested that this fine gentleman ought to grab his rod and catch some of those trout that he'd helped plant. He looked at me and very matter-of-factly said, "Oh, I don't fish, I just like to help you guys put them in."

That's what I call dedication!

*Gary E. Deiger
Waterways Patrolman
Greene County*

NO JAWS?

While on boat patrol on the Juniata River in Mifflin County with Deputy Waterways Patrolman Bob Glenney, we observed something swimming across the river. Upon approaching we found it to be a chipmunk. We watched the little animal tenaciously continue his swim until he reached the river bank and disappeared into the brush.

What was remarkable about this event was that the tiny rodent would try to make such a swim of about 250 feet, and that he succeeded, because this was an area of prime muskellunge fishing. It is hard to believe that he didn't wind up as a tasty meal for a musky or a large bass!

*Larry R. Baker
Waterways Patrolman
Mifflin/Juniata Counties*

"ABOVE & BEYOND"!

An amount of oil was detected floating on a small tributary stream by a farmer. Since a major pipeline crossing was in the immediate vicinity, the farmer called the company who owned the pipeline and reported the incident. The company immediately dispatched a crew and an investigation revealed no break in the line. The oil was, in fact, leaking from a fuel oil storage tank connected to a house trailer nearby.

The crew immediately erected slick bars to contain the oil and spread absorbent materials along the stream to collect the

spillage. This effort was certainly above and beyond the duty of the crew, and we take this opportunity to publicly thank the ARCO Pipeline Company — we need this kind of support.

*James T. Valentine
Waterways Patrolman
Huntingdon County*

NERVES OF STEEL?

Each year in Berks County finds many clubs conducting fishing rodeos. Last year, however, at one rodeo I found a first. One gentleman presented me with a small box, stating, "A friend's nephew left this grenade at home while he was on leave. Would you take care of it?" I laughed, thinking it a joke . . . until I opened the box. Would you believe it really was a hand grenade, signal type, and brand new? I delivered it to the State Police Barracks immediately. My wife wondered if that didn't bother me. Not at all. Of course, I never did tell her that I had my hand on it all the way to the Police Barracks; and, all the way home, after getting rid of the darn thing, I kept checking if it was still there! Bother me? Not a bit!

*Ammon F. Ziegenfus
Waterways Patrolman
Berks County*

DISGRUNTLED!

While working in my office last March 5th, I received a phone call from a man who was complaining because he could not catch any trout at Harveys Lake. When I explained to him that trout were not in season anyway, he replied, "I know that; but, if I am not mistaken, you usually stock the lake about this time of the year with preseason trout and I really have a ball catching them." I replied that for this very reason I requested that no trout be placed in Harveys Lake until after we close the water on March 14th . . . the party is over! The printable portion of what I heard (before the phone was hung up) was, "I think that is a lousy trick!"

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

ONLY WHILE FISHING!

One of the reasons that fishing is probably so popular is that it is fun and over a period of time some things happen that are remembered for many years.

This past January, during one of the cold spells, two anglers were fishing at Brunners Island below the "warm water" on the Susquehanna River.

While fishing, they were looking across the river towards Lancaster County, and, several hundred yards out an object was sort of drifting downstream. There ap-

peared to be water or vapor coming from the one end that was above the water. It apparently appeared very similar to a whale. At this point in time many guesses were made. The object suddenly came to life and started for shore. A cow . . . just a plain black and white cow!

Warren W. Singer, Jr.
Waterways Patrolman
N/York County

SAILBOAT STREAKER—

Last summer, while on patrol on Harveys Lake, assisted by Deputy Waterways Patrolman Charles Urban, a large boat came up alongside of our patrol boat. The operator appeared to be very upset as he explained that he and his wife and guests had just witnessed a *streaker* in a small sailboat. He asked me if I could do something to curtail this action. I spoke with the streaker involved. (he had replaced his trunks) and I doubt if he intends to "sailboat streak" again.

Claude M. Neifert
Waterways Patrolman
Luzerne County

GETTING POPULAR!

The fishing pressure and catch on the first day of this past winter trout season was excellent. Roy Rager of Milroy, who has a camp in Poe Valley, called to inform me that he saw more people fishing Poe Valley Lake on Saturday, December 1st, than ever before.

Richard Owens
Regional Supervisor
Southcentral Region

HEAVEN FORBID!

A man stopped me yesterday in Shavertown and asked if I wanted to have a "fish oddity." He gave me a jar that contained a bluegill which he had placed in alcohol (rubbing) for preservation. The unusual aspect of this particular bluegill was that it has what appears to be *two mouths*. We intend to have the fish examined by someone who will be able to tell us "yes" or "no." It is a good thing that this oddity does not happen with *Homo sapiens*!

Claude M. Neifert
Waterways Patrolman
Luzerne County

HARD WORK! WET, TOO!

A very gratifying day was spent at the Medix Run Stream Improvement Day in which about 300 scouts from the Allegheny County vicinity worked on stream improvement. It was more gratifying than usual as the boys had a hard rain and rising stream and chilly temperatures to work in. The particular crew that I worked with did very little complaining and worked very diligently and completed their device, a 70 foot channel block. I wish to thank each one for a job well done; and, if I could have had controlled the weather, I would have given you some swimming weather to work in!

Stanley G. Hastings
Waterways Patrolman
Cameron County

SHORT RULE

Need a quick rule of thumb for measuring? Remember a dollar bill is about 6-inches-long, then estimate accordingly. Actually, it measures 6½" by 2¾".

Bernie Ambrose
Waterways Patrolman
Elk County

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Walleyes are basically fish eaters. They prey on other fish from the time they are tiny fingerlings about half an inch long. And if no other food is available, they will attempt to eat each other.

Fish feeding along the banks of a stream, particularly trout, are fine prospects for the dry fly. The bank feeders are accustomed to taking not only aquatic insects but also land insects that fall into the water, while fish feeding in open water are more likely to be selective, taking only natural insects that are hatching.

Good trout fly patterns at this time of the year are the Quill Gordon, Gold-Ribbed Hare's Ear, Dark Hendrickson, Wooly Worm, and Muddler Minnows in light colors.

If you have trouble getting a bucktail or streamer down into the water, soak it well before attaching it to the leader.

Take a few seconds to study a pool or riffle before beginning to fish. Try to pick out the spots where fish are likely to be feeding or resting, then fish these spots very, very carefully. A sloppy or aimlessly directed first cast can put down all the trout within reach of the angler.

If a path has been worn along one side of a stream by anglers, try fishing from the opposite side. You will be in less-disturbed water. Areas of streams that are the toughest to reach usually are good spots because so many anglers refuse to accept their challenge.

The point is the important part of any hook. If it is sharp, it will penetrate the flesh of the fish with the lightest pressure. Use a small hook hone to keep points needle sharp is a good habit.

A word to beginners in dry-fly fishing: use a bushy bivisible. It floats to perfection, can be easily seen, and takes trout.

Most natural baits are too small and light to get down into the water with their own weight. So use a small split shot with a grasshopper, worm, small minnow, or hellgrammite. But pinch the shot on the leader a foot or so above the hook. It will get the bait down, but will not interfere with its natural appearance.

Fish areas where the water tumbles through riffles or drops over an obstruction or where a tributary stream adds its water. The oxygen content of water in such areas is much higher than in other sections of a stream.

It's hard to detect the strike of a trout on a nymph. A good tactic is to attach a dropper to the leader, about a foot below the line, and tie on a high-floating dry fly, such as a bivisible. The slightest touch of a trout on the nymph, which will be drifting deeper in the water, will cause the floating fly to twitch.

May and early June are prime times for perch fishing. The fish strike better at this time of the year, and their flesh is at its tastiest best.

Brown trout like slow-moving sections of streams. A deep hole close against the bank is very attractive. The deep water gives the fish protection, and the shallower water along the bank is an excellent feeding station.

Patches of foam are often seen at the heads of stream pools. Try dropping a wet fly into the foam, allowing it to sink. Because natural food is suspended in the water, trout feed at such locations.

How can you use the information a stream thermometer gives you? Here's one formula: If the water is colder than 45 degrees, use bait or spinners; from 45 degrees up to about 55 degrees, use wet flies; if above 55 degrees, dry flies are in order.



FLY TYING

The French Tricolor Midge

by Chauncey K. Lively
photos by the author

It is always fascinating to find an obscure, local fly pattern in some far-off place and to discover it works equally well on home waters. But when its effectiveness spans continental boundaries it takes on an even greater allure.

On our annual jaunts to Michigan we always look forward to fishing with our good friend, Mrs. Paul Young. Not only is Mrs. Young the most delightful of fishing companions, with an unmatched enthusiasm for the sport, but her skills as a fly fisher are legendary in Michigan. Robert Traver, in his book, *"TROUT MAGIC,"* aptly dubbed her "Queen Martha Marie." On the stream her effortless casting immediately identifies her and on more than one occasion I have heard total strangers, watching her from the bank, remark with a touch of reverential awe, "She must be Mrs. Young."

A few years ago a famous French angler visited Mrs. Young and she (herself born in France) introduced him to several favorite stretches of the

Au Sable River. One weedy flat in particular, with its midging trout, reminded him of the chalk streams in Normandy and he bent on a little dry fly called the "TRICOLOR MIDGE," developed on his home streams. The French fly was an immediate success with the tough Au Sable browns and Martha Marie added another pattern to her already well-stocked fly box.

When we arrived a few weeks later, Mrs. Young related the aforementioned experience and showed us the Tricolor Midge. It was of fore-and-aft design, which I've always felt is an excellent treatment of a dry fly midge pattern. Dressed thus, the fly balances perfectly without requiring tail support; and, of course, real midges have no tails. The rear hackle was white, the body red, and the front hackles were mixed black and brown. There were no wings. Naturally, we promptly tied a supply of the little flies for ourselves and they have since become "regulars" in our fly boxes.

I knew of no better place to try a new midge pattern than Fisherman's Paradise and it was there, the following Labor Day, that we gave the Tricolor Midge its Pennsylvania christening. The expected midge hatch came off in the evening and the little Tricolor, in sizes #22 and #24, was equal to the task. Not only did it hook an impressive number of midge-feeding trout, but the ease with which it could be seen in dim light was a revelation, thanks to the white rear hackle. That is a distinct advantage when fishing in

deep shade . . . or in late evening . . . or in general, when one's eyesight is past its prime. White hackle is sometimes difficult to find in dry fly quality, and particularly in the small sizes. A next-best substitute is pale cream hackle but it lacks the almost luminous quality possessed by stark white in low light levels.

The Tricolor Midge is quite easy to dress. For tying thread I use red Danville pre-waxed nylon, which not only holds the fly together but serves as body material as well, eliminating the need of a separate strand of floss, or fur dubbing. As with all small flies, hooks with turned-up eyes are preferred over down-eyes because of their superior hooking qualities. Most hackles have a small amount of curvature in their barbles, which, when wound on the hook, causes the barbs to flare slightly in the direction of the hackle's dull side. This may be used to advantage when dressing fore-and-aft flies by winding the rear hackle with its dull side facing the bend and the front hackles with dull sides facing the eye. Front and rear hackles are thus flared away from each other, providing a broad base for best balance.

Since our introduction to the Tricolor we have used it to good advantage as a general purpose midge on many streams in the Keystone State. There are many occasions when a variety of midges are on the water, particularly on warm evenings, and this is when the pattern seems to work best.



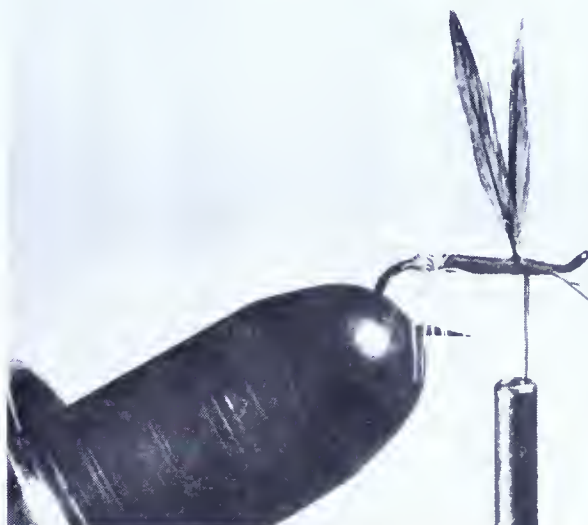
A minimum of materials and tools are required: fine, red tying thread; up-eye dry fly hook (size #20 to #24); one each white, black and brown hackles (barbule length should not exceed 1-1/2 times hook gap); and small, pointed



scissors. Clamp hook in vise and tie in thread at bend. Bind white hackle by its stem to hook, at right angle and with dull side facing bend. Bend stem along shank and bind. Trim excess.



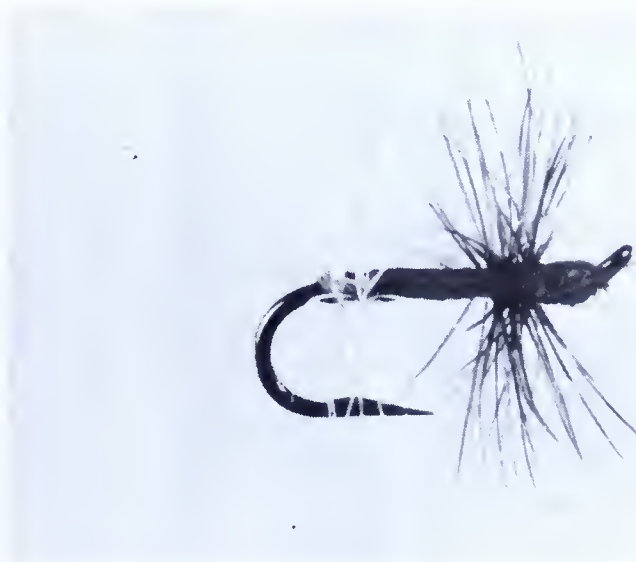
Clamp hackle pliers to hackle tip and wind in close turns. Tie off and trim off waste hackle tip. Form body by winding thread forward in close turns over 2/3 length of shank. If required, wind several layers of thread for desired



thickness. Place black and brown hackles together and bind to hook as in step 2, except that now the dull sides should face the eye.



Wind rearmost hackle first and tie off. Then wind second hackle through the first, taking care to avoid binding down barbules. Tie off second hackle and



trim excess. Then build a neat head with thread, whip finish and apply head lacquer. The Tricolor Midge, ready to fish.

by paddle,

power,

or sail . . .



You can get there from here!

by Alan MacKay

Marine Services Specialist

Pennsylvania's diverse system of waterways offers boating opportunities to match almost any recreational desire. Thirty miles of Lake Erie shoreline open up the entire spectrum of the Great Lakes to our cruising boatmen. The Delaware River pours into Delaware Bay, providing access to the great Atlantic.

The Monongahela, the Allegheny and the Ohio, travelling through Pennsylvania, feed into the great river system of Middle America. When setting sail from Pennsylvania, you can get there from here!

For trailer boaters, under power or sail, hundreds of inland lakes and river pools continually beckon during the warm summer months, with lyrical named like "Wallenpaupack," "Tamarack" or "Tionesta."

Our whitewater tributaries have spawned a host of national champions in competitive canoe and kayak events. Guided tours are available for the novice, and there's plenty of challenge for the experts on the Youghiogeny, the river which, in its

pronunciation alone, separates the native from the tourist!

For the fisherman, the Commonwealth's lakes and streams provide some of the finest angling for both trout and warmwater species to be found anywhere in the eastern United States — from bass, walleye and pike, to panfish, to the fighting salmon and giant muskellunge.

Pennsylvania offers an open invitation to all boaters, residents and visitors alike, to enjoy our bountiful waterways. We ask you, that when you boat, to boat wisely and courteously, to prepare for safety through education, and to help us to preserve our precious waters for those who follow in our wake.



How time drags . . . when you're *waiting* to have fun!



Ashore & Afloat

by Gene Winters

It isn't today's kids that have me worried . . . it's the adults!

If we're honest, I'm sure most of us have noticed that not only the kids have changed; frightfully, so have the adults. Unfortunately much of it can't be called a change for the better. We fight and bicker more . . . we cheat and lie more . . . we hurt and harm more. There are those days when I am firmly convinced the entire world has gone completely mad and I stand alone, on an endless treadmill, the only sane person left in the world. Then, in a snap back to reality, I recall where and how HE ended. And I realize I, too, am not without my share of guilt.

If most of the youngsters of today were to hold up a mirror, the reflection

they would see would not be theirs, but ours! And, more often than not, they don't like what they see, and neither should we. It's not argumentative; we know how they emulate us. The cussing, the drinking, the smoking, the backbiting . . . and some of the good, too, *when and if they can find it!* Trouble is, we grownups(?) haven't really been letting much of the good shine through these days. Perhaps, the BICENTENNIAL YEAR would be a good time to go back to the basics.

For a beginning, there is a gnawing need for us to start talking *to* instead of *at* each other. To reach out and touch someone's life in a positive way. Sure, there are times along the riverbank, on the boat or at dockside when we *deserve* to be alone with just our thoughts. But maybe . . . just maybe . . . it's become another case of overdoing a good thing. This summer, this season, why not really share yourself with someone — we all have something to give. A smile in place of a frown, a kind word in place of a cuss, a friendly jab in the ribs instead of a knife in the back. What better place to begin what we still should be preachin' than down by the old mill stream, pond, or river? What better way than by asking the neighbor down the street, unspoken to for six months, to help break in the new bass boat? And would you be embarrassed to wipe a tear from your eye when you sensed the warmth and love a senior citizen

felt just sitting by dockside with you, chatting away some otherwise terribly lonely hours?

Don't forget the youngsters, either, *including your own*. Don't just *take* the time for them, *make* the time! What child wouldn't be thrilled beyond words by a boat ride, especially his first? What kid wouldn't be overjoyed just to walk through a marina or dealer's showroom and visit the "ship's store"? Many a dealer, except in his busy times, would be delighted and proud to show off his wares with a "cook's tour" and maybe even a stop in the engine room or prop shop. The civic groups and sportsmen's clubs do an outstanding job for the tiny folks but they are often overworked and understaffed. Besides, it's hard to beat a one-to-one relationship, especially with the little people. Here's something really worthwhile *you* can provide.

I'm through believing every change in this modern world is automatically a change for the better. I'm convinced if we go back to the basics, the next time our kids look in the mirror, they'll *like* what they see! What better time to try it . . . our BICENTENNIAL YEAR? I don't know about you but I'm sick and tired of man's inhumanity to man and ashamed of my contribution to it, no matter how small I would like to believe it has been. I'm starting a campaign of one to turn it around. Care to join me?



Kids and water go together . . . it's a great way to get a youngster started off on the right foot with an early beginning in the outdoors. Can't "find" time? MAKE TIME! Why not take a neighbor along, too?

Sportsmen's clubs, civic organizations and your local Waterways Patrolman do a fine job keeping youngsters on the right track while having a barrel of fun, but there's always room for YOU in the program!



CO-OP NEWS

by Bill Porter

"Dedicated to the proposition that raising fish is as much fun as catching them, the sportsmen who man Pennsylvania's sixty-one cooperative nurseries deserve considerable public attention and acclaim for their conservation efforts on behalf of the state's fishermen. To this point, then, the *Pennsylvania Angler* will include in its pages a regular section devoted to the activities and successes of these clubs performing a public service for other sportsmen."

So went the first paragraph of the first cooperative nursery news article, dated November 1967. And with this current article a landmark of sorts has been reached — a centennial celebration — for over a hundred articles, including the regular feature and special stories, have been written about the Cooperative Nursery Program.

Currently, there are over 170 nurseries in operation and 1,000,000+ fingerlings ready for distribution to the clubs next month.

A review of some of the past articles is in order, touching some of the highlights of the last several years. There was the unusual, the humorous, the ingenious, the troublesome, and the persistent. The balance of this article will treat some of the lighter and more unusual nurseries in the program and next month we will handle the more serious issues faced by many clubs in order to continue operation against heavy odds.

Location of nurseries seems to follow the dictum that where there is water, there might be a cooperative nursery. The first one written about was in a public park in Downingtown, the Brandywine Trout Club; next month's story involved a Potter County club with its nursery in the front yard of an East Fork Rod and Gun Club member. And perhaps the ultimate in locations was (and is) the site of the Lil-Le-Hi Nursery at Allentown. This nursery was part of the vast Trexler estate given to the city



Some members of the Lil-Le-Hi club pose before one of CO-OP's oldest nursery.

of Allentown.

Over the years, many interesting methods of construction have appeared — some quite innovative and certainly not the standard garden variety of raceway form. For example, an early article on the Eldred Conservation Club, McKean County, talked about the members building their first 30-foot raceway in the basement of the club president's home. When spring arrived, the members took off the basement door and moved the redwood trough to its permanent home!

In the same pattern of ingenuity, the Oil City Izaak Walton League people utilized a circular waterway, once part of a formal park garden for their cooperative nursery. There were no water problems and sectioning the nursery was easy in the manner that a pie would be sliced.

And where most nurseries are built below ground level, St. Marys Sportsmen built their nursery above ground and had a mild frost problem. The nursery waters froze solid every year. Obviously, their fish are stocked early. In the meantime, these Elk county folks have produced a lot of trout, entering the program back in 1959.

Finally in this category, there is the Northeastern Lancaster Rod and Gun Club nursery built into the bottom of a foundation of an old farm house. A fine limestone spring bubbles out of

the cellar and has produced some of the finest brook trout in the state.

Then there is the matter of diet. Pellets and ground venison are staples currently suggested by the Fish Commission. However, there have been some strange diets fed to cooperative fish in the past — not necessarily *good*, but at least *different*. A northern tier county club reported feeding two bears to its trout. The Port Clinton sportsmen have been known to give their trout a bit of a salad now and then. Some chopped bananas, tomatoes and even bits of watermelon plus raw elbow macaroni were consumed by the trout along with the more conventional pellets. Another club fed hundreds of dozens of ground hard cooked eggs to their fish with no deaths but a reduced growth rate. And speaking of venison earlier, the Marienville Cooperative Nursery in the Allegheny National Forest probably holds the record for feeding this meat. The original story on this club, done in August 1969, reported the nursery manager's figures at a ton and a half of venison fed to 10,000 trout in one year. And the trout grew and grew and grew.

And that just barely scratches the surface of the unusual, the different and the innovative. Next month, Co-op News will complete the centennial review with some of the problems and survival characteristics of the cooperative nurserymen.

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Angler

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Special Bonus Edition

The "200-mile bill"

When President Ford, on April 13, 1976, signed into law HR 200 (a convenient reference to the 200-mile extended jurisdiction), one of the most comprehensive pieces of legislation in the history of the United States became law and was titled, "The Fishery Conservation and Management Act of 1976."

Three years ago the Pennsylvania Fish Commission, recognizing not only the direct and very blunt effects on Pennsylvania's programs in fisheries, backed the Joint Resolutions to the Congress and to the Administration, enjoining the President and the Congress to take "immediate interim action pending effective international action to extend the jurisdiction of the United States over coastal renewable resources over a defined area which is adequate to protect those resources from further serious depletion and to institute management measures with maximum participation of those involved in marine resources to insure the maximum benefit from those resources."

Well, it's all been done and the Act as it finally reached the President had undergone a phenomenal change from the time, just three years ago when Mr. Studds introduced his "200-mile bill." Analyses of the bill as passed make constant references to "recognition," "opportunity," "challenge," but the more one studies the Act as passed, the more it is realized that this is a truly enlightened piece of legislation that at first view seems to have transcended selfish interests of the fishing industry and the marine recreational fishing industry, but has made the resources themselves a consideration more important than those of the State Department or the Department of Defense. The law as now enacted requires that the United States continue to renegotiate existing treaties, and at the same time recognizes that there will be certain trade-offs which are already inherent in the conversations common at any workshop related to implementation of extended jurisdiction. The Canadians — probably more suave at this kind of thing than the United States can be, being over 200 years behind them, are already suggesting lower tariffs which may lead to lower fisheries product prices and including the considerations of offshore drilling in the Georges Bank and other sites of potentially rich yields. Emergent nations, affected by tariffs on twine (used in nets) and on electronics gear are looking at 94-265 as a means to gain economic advantages.

Pennsylvania seems like a strange bedfellow with those truly coastal states who have viable interests in the marine fisheries. Our interest, of course, is in the anadromous fish, spawned in fresh water but yet which spend most of their adult lives in marine waters — most of these species having had historically significant influence on the development of Pennsylvania are in turn subject to management under the new Act. All of the herring family and striped bass — and potentially salmon, which have an historic background in the Delaware drainage are certainly worthy of our concern and attention. Congress in its infinite wisdom, and certainly somewhat influenced by the agencies, spelled out the ultimate in sweeping requirements for conservation and management and eventually implementing procedures for the purposes of this Act. It is very evident that the authors of this legislative language had available a broad background in the problems that have perplexed fisheries managers over the years, and the Congress overwhelmingly agreed with them as to the methods by which these problems may be dealt with.

Perhaps the primary feature of this signal legislation is the authority granted to the eight Regional Fishery Management Councils. Although this is a clear example of federal preemption of state authority, in this case the inevitable result of the extension of our fishery jurisdiction beyond the territorial limits of the states in the former 12-mile contiguous fishery zone is the manner in which the Regional Fisheries Management Councils are to be formed. Pennsylvania is part of the Mid-Atlantic Regional Fisheries Management Council by virtue of our interests in the anadromous fish that belong at some part of their lifetime to Pennsylvania. We will be guaranteed two members on the Mid-Atlantic Regional Council — the Executive Director, as mandated under the law, as "the principal state official with marine fishery management responsibility and expertise (so long as the official continues to hold such a position). Pennsylvania will be guaranteed one more voting member on that Council to be selected from a list of qualified individuals which means an individual "who is knowledgeable or experienced with regard to the management, conservation, or recreational, or commercial harvest of the fishery resources of the geographical area concerned." In the six states in the Mid-Atlantic Council, there are six more voting members authorized, but naming of these is left to the Secretary of Commerce who must name these members from 108 "cannon fodder" names submitted by the states. Certainly Pennsylvania's interest is primarily in the recreational fishing industry of not only the marine fishery, but the anadromous resources available to Pennsylvanians when we succeed in getting our resources back into Pennsylvania where they belong.

We are pleased to be able to publicly state our appreciation of the Governor's attitude in the appointment of those members of the Regional Councils, who will represent Pennsylvania's interests. The Governor has in every way endorsed the naming of persons who are truly qualified under the definitions of the law and who have regional objective views in implementing the Act. Speaking in all frankness, Pennsylvania has no more right to demand its third voting member than do the states of New York, New Jersey, Delaware, Maryland and Virginia, and our greatest hope is that the best interests of the resources will be served.

At the time this is written, it is apparent that every political hack in other states who can read tide-tables is beating a path to his respective Governor's door looking for an appointment to these Councils, and we are proud to say that from this Commonwealth only unselfish interests are being served by the actions of our objective overview and response to the mandate of this Act. Implementation of the Fishery Conservation and Management Act of 1976 may be accomplished on a differential basis but Pennsylvania's approach to its participation in this implementation should be construed as being the purest of all — we have to believe that future generations will have reason to be grateful. It is now up to those of us in the profession of fishery conservation and management to demonstrate that, given proper authority and reasonable manpower and fiscal resources, we can conserve and manage our fisheries.



Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

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CONTENTS

Popping for Bass by Charlie Zaimes	8
The Plug Man of Ellwood by Waterways Patrolman Don Parrish	10
Tiger of the Tangles by Loring D. Wilson	12
A Guide to Raystown Lake — an ANGLER SPECIAL FEATURE	17
Antietam Creek by Gerald A. Almy	34
Life on the Old Canal by Ted Fenstermacher	38
Brushing up on Basics by Alan MacKay	44

Front Cover: A sailboat cruises peacefully on Bucks County's Lake Nockamixon, 1450 acres of fishing and boating pleasure. A variety of gamefish have been planted in Nockamixon and Pennsylvania anglers are looking forward with great expectation to their "coming of age."

Back Cover: What appears to be a "stare down" between that youngster and a painted turtle is merely an attempt to get to know each other better — though it's doubtful the turtle cares!

Photographs by Tom Fegely

MONTHLY COLUMNS

FISHING OUTLOOK	2	CO-OP NEWS	16
LEAKY BOOTS	4	STREAM NOTES	42
TAKING A CLOSER LOOK	6	ASHORE & AFLOAT	46
ANGLER'S NOTEBOOK 48			

James F. Yoder, Editor

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Luther Jarret and his wife Martha, of West Chester, enjoy a relaxing day of fishing on the Brandywine Creek.

fishing outlook

by george e. dolnack, jr.

With the June 14 bass opener, all species of gamefish will be in season and fishing throughout the state will be in full swing. Many anglers will abandon the streams in favor of our lakes and ponds. And while the impoundments are getting most of the attention, some good action on the streams is passed by.

One body of water that is rediscovered by more anglers each year is the southeast's historic Brandywine Creek. From its headwaters on the southern slope of the Welsh Mountains near Honey Brook, where the east and west branches originate about a half mile apart, the Brandywine drops almost 1000 feet in its 60-mile race to the tidewater and the Delaware River.

First appearing in printed history as

the Fishkill of the Swedes and Dutch, the origin of the Brandywine's name centers on two stories.

"*Brandewijn*" was a Dutch gin whose color — clear and faintly golden — was also the color of the Brandywine. One legend relates that a ship laden with these spirits was sunk by ice in the Brandywine's estuary, thus giving rise to its name.

The other account, which is given more credibility by some scholars, says that the Brandywine was named after Brantwyn, an early Swedish settler on the lower reaches of the creek.

In 1638, when the pioneer Swedes and Finns first saw the Brandywine's mouth, it was a river of food to the natives, the Lenni-Lenape Indians. Each spring the creek was jammed with great spawning runs of shad, salmon and other fish.

But in the early 1700s, dams and weirs near the Brandywine's mouth cut the upstream journey of the migrating fish, particularly the shad since they are not good jumpers. This caused the Indians to petition the authorities for redress. Crowded out by the influx of settlers and with their food supply diminished, the Lenape eventually immigrated to Pennsylvania's Wyoming Valley.

Other dams followed and in 1756 the Quakers who farmed Chester

County also became concerned about the fish. They were authorized to inspect the Brandywine's Dams to insure that the fishways were left open and to break the dams if they were not. However, being of peaceful nature, the Quakers backed off when threatened by the crazed antics of a sword-waving major dressed in full military regalia, and standing atop his dam. Though four dams were breached several years later, the battle for fish was lost in the wake of progress.

The Brandywine is best remembered for the battle that was fought there during the American Revolution. British General Howe, in an effort to weaken the patriots cause by striking into the core of the region that supplied the Continental Army with flour, cannons, cannonballs and Pennsylvania rifles, landed a large force at "Head of Elk," now Elkton, Maryland, and marched them northward.

The superior body caused Washington's troops to withdraw as the redcoats advanced. Near Chadd's Ford, where the Brandywine now flows under Route 1, Washington decided to make a stand and took to the high ground on the creek's east side.

In a furious battle on September 11, 1777, the Continentals engaged an army twice its own strength. Out-

flanked by the British who crossed the Brandywine near its forks, they were forced to withdraw to Chester. Howe, slow to follow up on the rout, failed to penetrate the heartland of Pennsylvania and settled for occupation of Philadelphia. Despite his defeat at Brandywine, Washington succeeded in keeping a strong body of troops between the British and the rich valleys of interior Pennsylvania.

Today, there are no more wars over dams, or shad runs, on the Brandywine; but, the creek offers Pennsylvania anglers 35 miles of fishing from its headwaters to the Delaware State Line.

The East Branch is fishable from the Fish Commission-developed Struble Lake to its confluence with the West Branch, north of Lenape.

Most early season anglers concentrate their activities in the area between Glenmoore and Downingtown. This run of water is stocked with trout by the Fish Commission from the Devereaux Bridge, near Cornog, to Lyndell; and, from Glenmoore to Downingtown by the Brandywine Trout Club which participates in the Fish Commission's Cooperative Nursery Program.

This is also smallmouth water and walleyes that have deserted Struble Lake have been taken from some of the deeper holes. Other species found in the East Branch include suckers, fallfish, sunfish and bullheads.

Route 282 parallels the East Branch north of Downingtown and makes access easy; parking, however, is limited.

South of Downingtown, smallmouth and sucker fishermen like the bridges where the stream crosses

Route 322 and the other roads that crisscross Chester County.

The West Branch is also fishable most of its length, but is not as accessible as the East Branch. However, because it has a greater fall and is rockier, the West Branch offers more rapids, riffles and faster flowing stretches.

It is stocked with trout by the Fish Commission in the vicinity of Hibernia Park, and from the Bridge at Wagontown to about two miles upstream. The West Caln Sportsmen's Association, also a participant in the Fish Commission's Cooperative Nursery Program, stocks the West Branch with trout from Pratts Dam to Hibernia Park.

The West Branch also boasts a one-mile FLY-FISHING-ONLY area from Township Road 437 downstream to L.R. 15121, west of Cedar Knoll.

With the exception of walleyes, the West Branch has the same species of fish as the East Branch.

The Fish Commission's Icedale Lake, reached from Route 322 south of Honey Brook, is fished for smallmouth, largemouth, perch, crappies, sunnies and bullheads. Parking and a boat launching area is available and it's electric motors only.

The upper portion of the West Branch can be reached from Routes 340 and 82 north of Coatesville. It can also be reached from Creek Road at Mortonville and Route 162 near Embreeville.

Chester County Waterways Patrolman Ray Bednarchik says that the Brandywine Main Branch has a nice supply of smallmouth, a few largemouth, rock bass, suckers, fallfish,

bullheads and sunnies. It also has walleyes and muskies. An occasional pickerel is taken from time to time.

Though bass up to 21-inches have been caught on the Brandywine, Bednarchik says that the average runs up to a foot. Additionally, legal walleyes and 42-inch muskies have been taken in the Lenape area. Bednarchik said that he would like to see more anglers take advantage of this fishery that keeps getting better each year.

The Main Branch is accessible from Route 100 south of West Chester. Most fishing is done from shore, but some anglers prefer to float portions of it by canoe or raft.

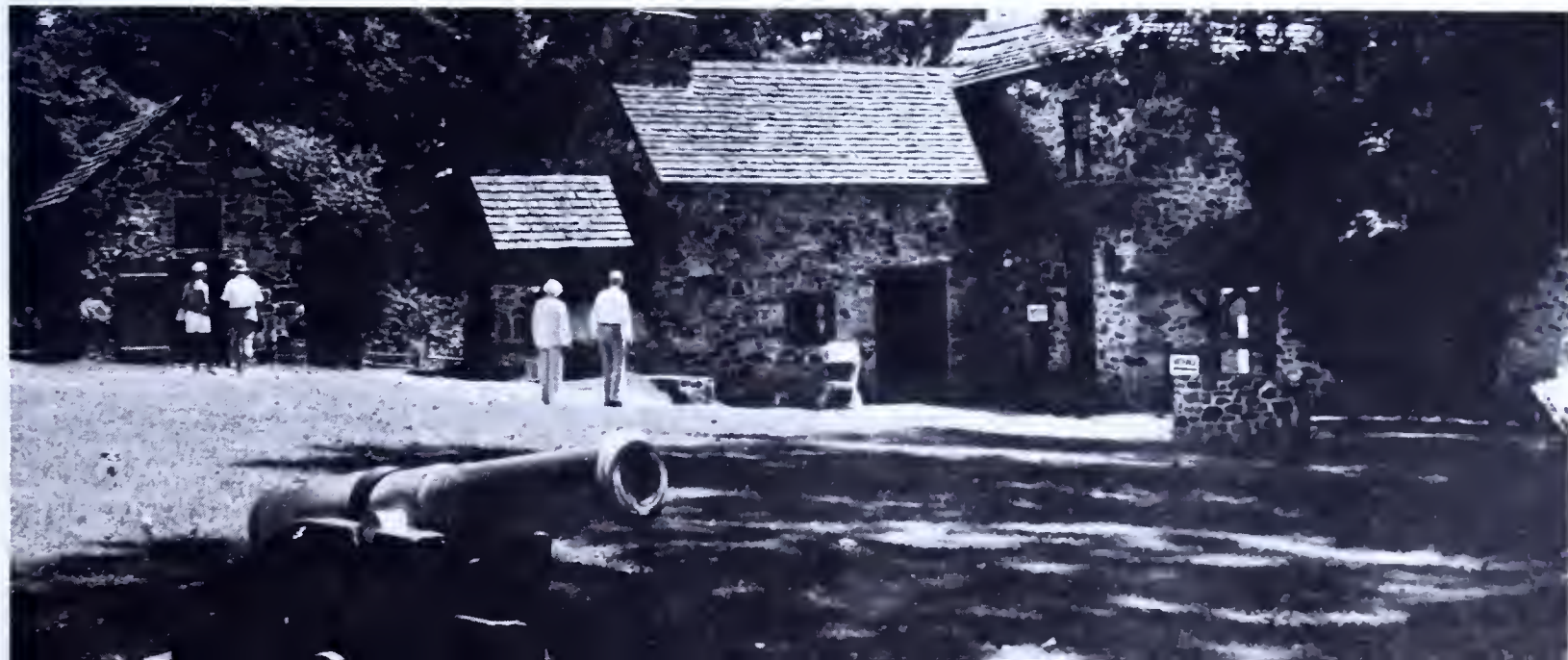
A popular trip starts at the bridge at Lenape and ends at Chadd's Ford. The water is relatively slow-moving here because of the pooling effect of several dams. This is about a four-mile run through flood plains, woods and small hills. It's perfect for a half-day excursion. Dams at Brinton's Bridge Road and Chadd's Ford require portaging.

Pools and riffles give up good catches of smallmouth, rock bass and sunnies. A #1 Mepps in silver or gold with a squirrel tail or a small blue/white Rebel are favorite lures. Minnows and hellgrammites also do well.

The Brandywine is a favorite of canoeists, especially during the warmer weather; best time to start a float trip is early morning.

From Chadd's Ford to the state line, there are no dams and the water flow picks up. Bullheads are more abundant on this flow and trout are sometimes taken. Access to this portion of the stream is also available from Route 100.

Take a break — visit Lafayette's headquarters at Brandywine Battlefield Park, not far from Chadd's Ford.





WE BLEW IT!

The *Pennsylvania Angler* is a fine publication. However, we have been sent a defective issue this month, February 1976. This issue of our subscription begins with page 9 and runs to page 16. Then it starts with page 9 again and runs to page 24. It then starts with page 17 and runs to page 24 again. I was wondering if you would please send me another copy of the February 1976 issue of the *Pennsylvania Angler*. Thank you for all your help.

LOUIS E. PALERMO
North Wales

The printing presses kind of stuttered that month, Louis. Guess who received a copy with two sets of pages 1-to-8 and two sets of pages 25-to-32? The Honorable Calvin J. Kern, Member, Pennsylvania Fish Commission! Any good jobs open down there in North Wales? Ed.

WANTS TO HELP!

A letter of commendation to the Pennsylvania Fish Commission and to DER for cleaning up streams, also various other sportsman clubs. I was born and raised in Tarentum, Pennsylvania. As a boy I fished Bull Creek and the Allegheny River from Tarentum to #8 Dam. The only thing we could catch was suckers, catfish and carp. Before I was 20 years old Bull Creek did not even have a live crab in it due to mine drainage out the Bull Creek road. The only time we heard of musky, bass or walleye, it was like a myth. Now due to your wonderful efforts Bull Creek is once again alive with fish — even trout. And, the Allegheny River from Springdale Lock #3 to Lock #5 at Schenley is a musky, walleye and bass hotspot. Becoming a Senior Citizen this year I can't go out and work like I used to so I am going to send a small check of \$10.00 to help the work along. I hope that a lot of other fishermen will do the same thing. If they could have seen Bull Creek and the Allegheny River as I have seen them: no fish jumping, no aquatic life at all, and now it's a hotspot clear down to #2 Dam at Oakmont, Pa. If you have 1,500,000 fishermen in Pennsylvania and each one donated a buck or more a year for ten years, just think what wonders you

could do with 15 million dollars. So, come on all you sportsmen, dig in and help any way you can. Like I said, I'm a Senior Citizen as of May 21, 1976, so I am going to help out as much as I can every year. I am on a fixed income, Social Security and a pension from General Electric. With this money more hatcheries could be built, you could stock streams more than twice a year and improvements of all kinds could be made. I read about all of these improvements in the *Pennsylvania Angler*. So, I'm hoping you will print this letter in the *Angler*.

J. W. (RILL) JACKSON
Erie

Dear Mr. Jackson:

"On behalf of the entire Fish Commission, please permit me to express our deep appreciation for such a fine letter and for your contribution of \$10.00 to the Pennsylvania Fish Fund.

"Such expression of support, especially by a senior citizen living on a fixed income, is rare indeed. We are all the more grateful that you have taken this means of showing your appreciation for the work we are doing in halting pollution of our streams and lakes and in making sure the waters of our great Commonwealth will be well supplied with fish for the enjoyment of both young and old.

"Thank you for your support, and please let me assure you that it will inspire all of us to work ever harder to protect, manage, and improve fishing for all Pennsylvanians."

Sincerely,

Ralph W. Abele
Executive Director

"QUACKING" UP?

On July 1974 I took my vacation with some others. We went to Tamarack Lake on a fishing trip. As I had gotten a new fishing outfit and had never used one like it before, I was anxious to try it as we had driven forty or fifty miles to get to the lake. I had consumed quite a lot of beer and went down to the lake. I tried to cast but it didn't work too good for me. A duck walked up to me and I said, "Hello, Mr. Duck."

A voice said, "Having trouble, buddy?" I showed him the new outfit and he fixed the line different. Then it worked swell and he showed me how to use it and I had no more trouble with it. He then introduced himself (I've forgotten his name) but he was a patrolman on the lake. I then told him my name and where I lived. He gave me a copy of the *Angler* and I got a subscription right then. I often wonder if he ever again in his work stopped to show a

beer-drinking, duck-talking fisherman how to cast.

JAY B. LEONARD
Tidioute

Writer Loring Wilson says his wife talks to artichokes, I've talked to deer; so, if you want to talk to ducks, Jay, go to it . . . whatever turns you on! Ed.

COOKING TURTLES . . .

The *Angler* often says "take a boy fishing." I do that often and get a big kick out of them. Why, when the fishing gets slow do they throw stones in the water?

This past season I took an old "boy" (75 — same as I) fishing with me. He caught a carp about 20-inches long. I swear he was scared of it and said, "Throw it back!" He said that was the biggest fish he ever caught. Five weeks later he passed away. I am sure glad I took him fishing.

Another thing: I hope someone tells how to cook a turtle. One man tells me to chop off its head, let it bleed and heave the beast into a pot of boiling water. Won't the entrails flavor it? He said, "No!" I don't believe it.

JON STAMBERGER
Philadelphia

I wouldn't touch his turtle stew with a ten-foot ladle, Jon! Must be tough chewing those shells, too. Perhaps one of our readers can help you. We've had some turtle dressing instructions sent in on numerous occasions, but too often the details were too gory for publication! Ed.

JUST CHECKING —

I was going through the March 1976 issue of the *Angler*, and on page 14 are listed the FISHING CITATION MINIMUM QUALIFYING SIZES. On the list is a minimum qualifying size for Pike (Amur River), but on page 15 you have listed Pennsylvania's Record Fish and on that list there isn't a listing for a State Record for the Pike (Amur River); also, on that list you have Sheepshead and Sucker listed for a State Record. Going back to page 14, and the Citation size list, there isn't any Citation listing for the Sheepshead or Sucker.

Could you explain to me, and the other readers, as to why one species of fish would be listed on one list and not the other? Is this an error on behalf of whoever made up the lists? If not, could you possibly explain to me why there aren't any Citation sizes for Sheepshead or Suckers, and yet there is a State Record size.

Could you also explain why there's a Citation size for the Pike (Amur River) and yet there isn't a state record listing?

I've tried to reason these questions out, but I'm at a loss for an answer. I've only been receiving the Angler for two years and enjoyed every issue. Keep up the good work. Thank you for your time and consideration.

FRED CARNEY
Johnstown

P.S. Your State Record List said the Steelhead Trout length was 33-1/3 inches. Could you please tell me if this is a typographical error? If not, how could I read a 1/3 of an inch on a rule?

You really read all that fine print, didn't you, Fred? Well, we'll do our best to give you the answers.

Looking at it as you did, it would indeed be reasonable to assume that someone was in error on the Citation/State Record listings for the Amur River Pike, the Sheepshead and the Sucker. Such was not the case, however.

By the time you read this you will have had time to digest Biologist James Meade's dissertation on the Amur Pike (May, 1976). In the account of angler Donald Burk catching the largest Amur Pike yet recorded, you will note that it measured 41-3/4 inches — a "smidge" short of the longest Northern Pike recorded in 1975 (42 inches). We've considered the Amur to be such a close relative of the Northern Pike that some of our literature has stated "... including Amur Pike" when reference to the former was made. Perhaps this has been somewhat of an erroneous reference since all esocids are related but we don't make such blanket inclusions with them.

But, as in the case of the Striped Bass (discussed in "Leaky Boots," April, 1976), the Amur Pike is almost "too new" to our waters to really have established a "Record" as yet. Setting the Citation Minimum Size was easier for the Amur Pike than the Striped Bass because of its similarity to the Northern Pike.

Sheepshead had been listed on our Citation Program at one time but was dropped because we received no entries in at least the last 10 years. Thus, the 1964 catch listed as a "State Record" still stands.

Suckers are not listed because of the great variation in maximum sizes attainable among the many species of suckers and the inability of most anglers to correctly distinguish one sucker from another. So many common names are given to suckers, most of which are in no way related to the names generally accepted in the realm of ichthyological taxonomy. Regarding those lengths, for example, Trautman's "Fishes of Ohio" lists the following maximums: Western Creek Chubsucker — 7.1"; Ohio Redhorse — 19.0"; Northern Shorthead Redhorse — 24.4"; River Redhorse — 29.0".

For all practical purposes this can be accepted for fishes in Pennsylvania waters and it does give you some idea of the wide variation existing within the sucker family. You can readily see that setting just a plain old "Sucker" category would be difficult since what might be a World Record for one species wouldn't even qualify for another.

Since the existing Sucker record was set in 1938, we can give you little information on it. There isn't anyone here in the building who worked for the Fish Commission in 1938 . . . a good number of our employees weren't even born yet . . . I was, but at about that time I was all tied up with elementary algebra, etc., and wasn't measuring suckers.

On that 33-1/3-inch Steelhead — you win that one, good buddy! The Citation Records in our Angler files list it at 33-1/2 inches. Somewhere along the line the fish was shrunk .16667 inches via a typographical error. We'll pass along that information to our record keepers and try to keep a tighter rein on things! Ed.

REBUTTAL —

I'm writing in regards to Mr. Souchak's letter in your February issue. I wonder what condition Bull Creek and Puckety Creek would be in today if it were not for the Boy Scouts and other young kids?

They have turned these creeks into fine trout streams . . . available to all. With the help of the Fish Commission and these boys (and a few adults), dams have been built, tires, refrigerators and a host of miscellaneous auto parts have been removed to make way for stocking.

When these labors are complete, and they have their 5-ounce sinkers and 20-pound-test line in the stream, your so-called "considerate" fisherman muscles his way in.

I suggest you have some patience. Share your bait and a little knowledge. You may find more to fishing than modern equipment and catching fish. And you just may learn something.

BILL SCHOEN
Lower Burrell

P.S. I'm 27, but a kid at heart.

"GLAD OF IT" —

I lived by the Chesapeake Bay all of my life and my family and I have camped, fished and hunted in northcentral Pennsylvania. I am now living in that area and I am glad of it. Thank you for keeping our lakes and streams fishable.

GENE DOBBS, JR.
Eagles Mere



ON THE WAY BACK!

For years the Schuylkill River in Berks County has been looked down upon by most fishermen in this area. True, many do catch carp, catfish, and suckers, but most don't believe that the river is clean enough to hold other gamefish. Well, on February 14, 1976, a fishing buddy and I tried it for something other than the usual bottom feeders. You can bet that we were pleasantly surprised when while casting spinners and small jigs below a section of rapids just north of Reading, I hooked and landed this 24-inch, 5-1/2-pound walleye. It was the very first time we had fished the Schuylkill and you can bet it won't be the last. Just wanted to let your readers know that . . . the Schuylkill River IS COMING BACK!

ROD HERMANN
West Reading

P.S. We had heard that fingerling walleyes were stocked in the river about eight or nine years ago. Is this true?

Would you believe 10 years ago, Rod? In 1966 walleye fingerlings were stocked in the Felix Dam. Since they have also been planted elsewhere on the watershed we can't rule out the possibility that yours was a "transient." He could well be a progeny of one of those planted in 1966. It's doubtful that your fish is one of those planted then; but, it is a remote possibility . . . very remote! Ed.



Taking A Closer Look

by Tom Fegely

REPTILES AS PETS

There's a corner of my schoolroom that tends to attract all who enter. It is here that I supply temporary homes for a variety of Pennsylvania's cold-blooded animals. At any given time during the September-to-June term, the room's residents could well include green frogs, spotted salamanders, spring peepers, milk snakes, garter snakes, painted turtles, wood turtles, box turtles, fence lizards, and a variety of other "critters".

Although the old adage that "familiarity breeds contempt" may be valid in some instances, where youngsters and wildlife are concerned the opposite occurs. In the past dozen years, better than two hundred reptiles and amphibians have taken temporary housing in the schoolroom. Each one of them has played some small part in educating a child before being returned to the woodlot or pond from which it was taken.

The responsibility of housing and feeding these unique classroom pets requires a certain dedication from the students assigned to the task. Fellow teachers, camp counselors, and parents are also frequently faced with the same responsibilities. Without proper food and living conditions, few of the animals would be alive when it comes time to release them back in their natural habitats.

Since reptiles (snakes, turtles, and lizards) need different foods and living conditions than amphibians (frogs, toads, and salamanders), they will be

Beth Foltz, Macungie, with pet box turtle.

dealt with in two different columns. Next month we'll take a closer look at "Amphibians As Pets." Hopefully this information will answer some of the basic questions most often asked about the care and feeding of our valuable cold-blooded wildlife.

WHAT KIND OF SNAKE MAKES THE BEST PET?

First off, the kind that makes the **worst** pet is one that is poisonous, can inflict serious wounds, or will not eat in captivity. Included in the former category are the rattlesnakes and copperheads. *Under no circumstances should a youngster be permitted to keep a poisonous snake!* Nor is it recommended that they be kept in a school classroom or campground "museum" for any length of time. Even if a glass-fronted cage is padlocked, the accidental breakage of the glass could result in the snake's escape.

During one of my first years of teaching, a harmless (*but big*) black rat snake escaped from a "locked" cage in my junior high school classroom. It next appeared *several months later* behind a stack of library books . . . *one floor above my room!*

In excellent condition and no worse for its foray through the heating passages and hallways of the building, I still think of the dilemma that could have been caused had the snake been a poisonous species. It would have been unsafe for any child to occupy the building until the reptile were found — which may have been never.

Two similar snakes that make good pets are the EASTERN GARTER SNAKE and the EASTERN RIBBON SNAKE. The smaller ones, especially, become quite docile and readily accept handouts of earthworms, small frogs and fish, salamanders, "fleshy" insects, and even strips of raw, lean beef. Older and larger garter snakes usually do not adapt well to captivity, have a tendency to bite, and excrete a foul-smelling liquid waste when handled.

The beautifully colored EASTERN MILK SNAKE is easy to tame and often adapts to captivity with relative ease. Unlike the garter and ribbon snakes, the milk snake is a rodent eater and must have a regular supply of mice or rats. Pet shops can usually supply these; or, field mice may be live-trapped. In any case, the rodent must be put into the snake's cage *live* as the milk snake is a constrictor and must kill its own prey before eating. Occa-

sionally some snakes learn to accept dead mice but this is certainly the exception rather than the rule.

The BLACK RAT SNAKE is similar in disposition to the milk snake and has the same sort of diet. Once again, young specimens tend to make the best pets. Young rat snakes are spotted brown and brightly colored as juveniles, becoming darker as they approach maturity.

A most unusual pet is the EASTERN HOGNOSE SNAKE. It lives entirely on toads and frogs which may present a problem to the owner during certain times of the year. The snake has a habit of playing "possum" when disturbed or it will even coil up and strike like a rattler — yet it never bites. All of its strange actions are designed merely for bluffing predators. Several years back I caught one that played its role for about two weeks but, after getting used to the kids, completely gave up its acting career.

The EASTERN SMOOTH GREEN SNAKE, often called a "grass snake," makes an ideal pet for a child. The unusually colored reptile has a very calm disposition and is fond of crickets and grasshoppers which are in

continued on page 33

Mike Kalb (left) and Ron Keller clean out a garter snake cage at Emmaus Junior High School. Cage is glass-fronted.





“Popping” for Bass

by Charlie Zaimes

“You can always tell when a big one is taking the lure — he’ll come up under it and just suck it down. He won’t come up and smash it hard like the little ones will.”

Those pearls of wisdom were given to me by an old-time bass fisherman when I was a whole lot younger and just beginning to learn the pleasures of surface fishing.

By “a big one,” the old man meant any bass that would top four pounds. Anything smaller than that was necessarily “a little one.”

In those days we made our own bass bugs, tying deer hair on a No. 1 hook and trimming it to simulate either a frog or an adult Dobson fly (we called them dragonflies). We tied some of these bugs with inverted wings so that when they settled down on a lily pad the hook would be riding up instead of down, thus enabling us to flick the bug off the pad without snagging. It worked like a charm . . . most of the time.

Those big bronzebacks just love to hide in the shade under the lily pads. When you drop the lure on top of the pads, the bass will see it and when you twitch the rod tip slightly to jerk the lure off the pad into the water he’ll grab it quick as a wink.

I haven’t tied any deer hair bugs in years. I haven’t had to because modern tackle manufacturers have

Author’s nephew, Billy Zaimes, with a four-pound largemouth bass he took on a Gaines popper.

come up with a very suitable substitute — the popping bug.

These poppers usually have cork or wood bodies with wings and tails of feathers. They come in all shapes and sizes and colors but have one common denominator: they all make a popping or gurgling noise when pulled across the surface . . . and they all catch fish.

The smaller sizes are great for bluegills. The larger ones are surefire for bass.

Basic equipment is a fly rod with a nine or 10-foot leader. I prefer a 5-1/2-ounce rod that's eight feet long with a stiff butt and a slender whippy tip. But you can use any fly rod that feels right in your hand as long as you can make consistently accurate casts of about 30 feet.

You can either fish from a boat or wade or walk the shoreline. Early morning or late evening hours are best. That's when the big lunkers move out of their deep holes and cruise the shallows to look for a meal.

Sometimes the bass will grab the lure when it hits the water. When they're really feeding I've had them

jump out of the water to grab it a foot above the surface. At other times they have to be coaxed a little. That's when it pays to be patient.

Make your cast and let the lure sit motionless while you count slowly to 50. Then give your rod tip a slight twitch, just enough to move the lure slightly. Frequently you'll get a strike with that first movement. If you don't, wait another half-minute and try it again. If that doesn't produce, start retrieving in short spurts, stripping in your line to move the lure about three feet each time, allowing 20 or 30 seconds between pulls.

Many times the bass will follow the lure and grab it when it's almost at your rod tip.

I hate to admit it, but the biggest bass I ever caught was purely accidental.

I was wading the shoreline of a small lake in the Poconos one evening and had my eye on a plump bass that looked as though it would go better than three pounds. I watched him for about 15 minutes and in that time he rose at least eight times to grab low-flying dragonflies.

I decided he might fall for one of my poppers and I began to strip out enough line to reach him. To do this I had to make several false casts. On one of the back casts my lure snagged . . . at least I thought it did. As I turned to see where it had hung up I heard and saw a tremendous splash and realized that the popper had indeed been snagged — by a huge bronzeback. It took nearly a half-hour to beach the big lunker and he topped the scales that night at six pounds, four ounces.

I never did get back to the bass I had been watching.

There are a lot of poppers on the market and they come in a wide spectrum of prices. The cheapest are Asian imports but their performance and durability are horrendously bad.

My personal preference is a Pennsylvania product — the Gaines poppers which are manufactured in Gaines, Pa. by Tom Egger, the former editor of the Pennsylvania Angler. Tom, his wife Lael, and their employees take real pride in the quality of their workmanship. And that pride shows up in results on the water.

*Armed with this kind of "ammunition,"
an angler can easily get his
limit of fighting bass.*



"The Plug Man of Ellwood"

by Don Parrish
Waterways Patrolman
Beaver County

*photographs by
Russell Gettig,
Staff Photographer*

Ed Latiano, whom I prefer to call "The Plug Man of Ellwood," though retired, spends countless hours in his basement all wrapped up in an activity which began as a hobby back around 1945. Mr. Latiano turns out professional-looking fishing plugs by the dozens. He explained, "I started out making small plugs, but I got interested in musky fishing so began making bigger ones!" This craftsman also makes spoon-type lures, but 95% of his work is devoted to plugs.

Over the years, Ed experimented with various materials for making plugs. He discontinued the use of fiberglass because it wouldn't take the paint readily. The final choice of material was wood.

"What kind of wood is best?" I asked.

"There are several good types," he replied, "but 90% of my plugs are made of well-seasoned cedar. Cedar is fairly strong, doesn't absorb moisture and holds the screws well. I use cedar mostly for surface plugs." Ed explained that an old telephone pole is the best source of cedar.

For sinking type plugs, Ed chooses cherry wood which is stronger and heavier than cedar. He also uses some birch, maple, hickory, sumac and imported mahogany for sinking and diving plugs. "The main thing is that the wood must finish out smooth," he pointed out, "for this reason oak is not suitable for plug-making.

There is no doubt in my mind Ed can duplicate any plug on the market but he limits his production to well known plugs which have been discontinued by commercial manufacturers. He also has creations of his own which catch fish. The vamp and the super spook are the most popular with his customers who range from as far west as Illinois and north to Connecticut. He has never advertised through magazines but says he might in the future. "I've received some publicity in the newspaper," Ed admitted.

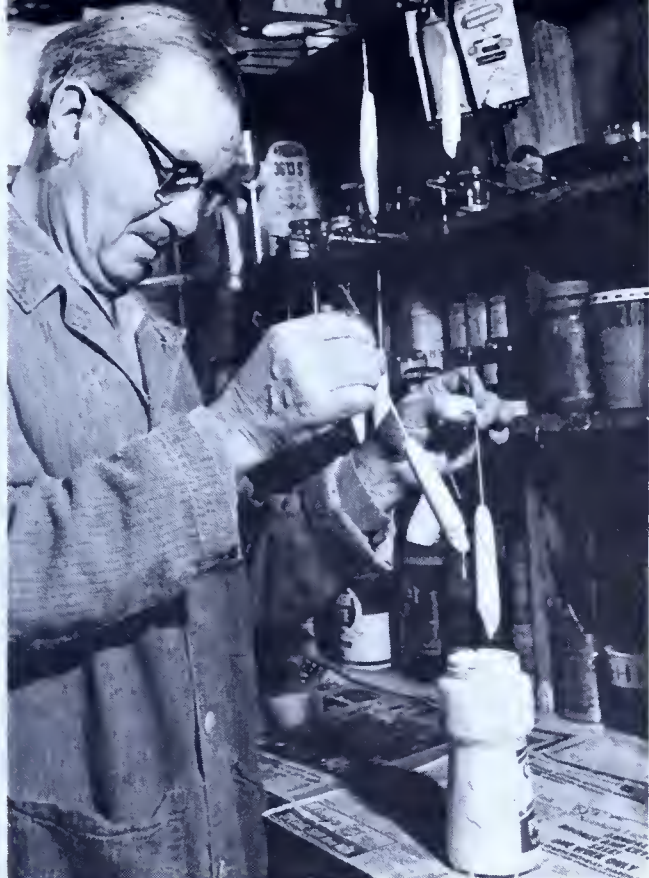
"What kind of price tag do you put on your plugs?" I inquired.

"Anywhere from \$3.00 to \$7.00, but I sell only to individuals - not companies," he answered.

In addition to turning out the plug bodies, Mr. Latiano makes most of the associated hardware such as wiggle lips and propellers. These small items are pressed out of stainless steel using dies which Ed designed himself. "All of the hooks are hand-sharpened before the finished plugs leave the

*Ed Latiano puts one of his plugs
through the final test
in a tank maintained especially
for that purpose as
Patrolman Don Parrish looks on.*





Ed Latiano is shown conducting some of the many steps involved in the making of his product.



Left: Applying base coat of paint. Top: Adding scale pattern, using common veil material and an airbrush. Below: Semi- and completely finished plug bodies.



shop," Ed added.

How does Ed go about making a fishing plug? I found out by taking the "tour" of his basement as he explained the seven steps of assembly.

1. The selected wood is cut square to length with a bench saw and then turned down by lathe to the exact measurement and basic shape.

2. Next comes sanding by hand and the use of special homemade tools to obtain certain desired features for different lures.

3. A pin is inserted into the tail of the plug for ease in handling and the first of two coats of a white base paint is applied to insure the lacquer will

stay on permanently. After 24 hours drying time, this first coat is sanded lightly and the second coat is added. Again, 24 hours drying time is followed by another light sanding.

4. The basic body color is applied with an airbrush at 30-pound pressure. This operation requires about 20 minutes per plug.

5. Stripes, or trim colors are now added with a 50-pound pressure necessary to spray through a veil material which creates the scale effect. This dries almost instantly.

6. A waterproof glue is applied to different size nails and the glass eyes are pressed into the wood. This same

glue is used to secure hardware as well.

7. The necessary hook-holding hardware is attached to the body, varying with the size of the plug.

In thirty years Ed has made approximately 7,000 plugs — but not all have been "fish getters."

"Many were scrapped because they failed the final test in the tank," Ed added.

I know enough of Ed's lures have performed for him to catch at least 50 legal muskies!

Ed smiled, "The biggest was 44 inches . . . but some bigger ones got away!" That's fisherman's luck, regardless of what lure he's using!



Smallest of the esocids, the pickerel makes up for size in aggressiveness.

“Tiger of the Tangles”

by Loring D. Wilson

My weedless spoon arched out over a tangle of rushes and lily pads, and hit the water with a soft “splat” when I feathered the spinning line. Holding the line taught between my thumb and forefinger, I could feel the flutter of the spoon as it sank to the bottom. By the time I had counted to four, the action had stopped. From experience, I knew that the water was only about two feet deep. I lifted the rod tip from its position of almost touching the water, and started to reel in rapidly.

I could feel the spoon knocking against submerged logs, and slithering through the pads. Suddenly the lure stopped dead in the water, and I clamped the line against the rod with my finger and reared back. I lose

about half of my lures that way, but this time I was rewarded as a chain pickerel sky-rocketed out of the water like a miniature marlin before it dove into the thick snarls of the small, acid lake. Slowly I started gaining line as I worked the pickerel toward the boat. I knew that the twelve-pound test monofilament would hold as long as the fish didn't half hitch the line around some hard underwater obstruction, so I put on pressure and kept the fish headed in my direction. Five feet from the boat, the acrobat decided to put on another acrobatic show, but that was his last display, and a few minutes later I slid the net under him — my eighth fish in a little over three hours, 19 inches of mottled green with a mouth to make *Jaws* wish he had false teeth!

I must admit at the outset that I am partial to pickerel. If bass fishing is a religion, as it is to many anglers, then angling for pickerel is a cult; and, like the off-shoot cults of most religions, pickerel fishing is a part and parcel of the greater aura that surrounds the black bass. Pickerel are generally found in the same waters that harbor the largemouth bass, and are often caught on bass lures and with bass techniques. Because of this, many bass anglers are, shall we say, less than friendly to the pickerel, and the names "jack" and "snake" are frequently applied to this much underrated fish.

The chain pickerel is, in effect, a more handsome fish than the bass, though it doesn't approximate the size of the largemouth — its big brothers, the pike and the muskellunge more than amply take care of that!

But the fact that pickerel are often caught "by accident" in the same waters that harbor bass does not mean that a pickerel is an indiscriminate striker. On the contrary, many times the pickerel is a much harder fish to catch than the bass, especially in the summer, when a pickerel fisherman may well strike far more small bass than pickerel on any given day. The old timers say that a pickerel's teeth fall out in the heat of the summer, which isn't true, but they certainly go off their feed, so far, in fact, that a lure must be dropped practically on their heads in order to induce them to strike. When that happens, however, the strike will be vicious (from *defense* rather than hunger), and eighty

percent of the time the pickerel will hook itself.

I remember one hot August day last year when I had been plugging for several hours in the shallows of a small peaty lake with water the color of tea, and had only struck two small bass which I released to grow, hopefully, into new world's records. I made their release contingent upon their promise to wait for me until they had reached massive size (don't knock it; my wife talks to artichokes!). Since the temperature had reached the upper 80s by 9:00 a.m., I decided to beach the boat and take to the water myself.

The bottom was firm, so I donned my waders and started slowly toward a wood duck nest box that had been erected in the midst of a spate of dead stumps, making long casts to every likely looking bit of cover. I was using a plastic minnow with a spinner attached, and my own jury-rigged weed guard which I have found necessary in most waters if I am really concentrating on pickerel. My eleventh cast landed about three feet from the nest box, and I saw a V-wake shoot from behind an adjacent stump and stop at the base of the pole to which the box was attached. It was a good wake, and with shaking hands (I invariably get buck fever whenever I *know* there is a good fish within range) I finished my retrieve, drew the rod tip back, and cast toward the box. With my usual finesse, I shot the lure right through the hole and into the nest box! Obviously, this is one of the reasons I use weedless lures! I have yet to figure out why I can't be *that* accurate when a grouse jumps six inches from my foot and wings leisurely away across a clearing. Thanks to my relationship with the grouse, Southwestern Pennsylvania has some massive lead deposits, and as many grouse as it started out with.

At any rate, I tightened up on the line and eased the lure back through the hole, dropping it into the water at the base of the nest box. The water that was thrown into the air by the fall of the plastic minnow hadn't even rejoined the lake when the surface erupted and a large pickerel took off through the shallows, pausing only to shake his head bulldog fashion. This one didn't take to the air — sometimes the big ones don't — and it took me fifteen minutes to extricate him from the tangles.

This fish I also released, but for a different reason. The pickerel was twenty-seven inches long, and weighed four pounds. But, its head was a third again the size (diameter) of its body! I don't know how long it had been off its feed — it was certainly strong enough, so the fasting can't have been that detrimental to the fish's health (or how much it had weighed before it had started losing weight), but when you consider that the freshwater record for the chain pickerel caught in 1948 in Green Pond, New Jersey weighed approximately nine pounds and was thirty inches long (with a girth of fifteen inches), you can see how close my emaciated fighter would have come to either tying or breaking the record had it been in good condition.

The chain pickerel is a fish of many names, even to those who appreciate him. His scientific Latin name, for all of you frustrated Roman taxonomists, is *Esox niger*, although in typical pickerel fashion he is listed in some books as *Esox reticulatus*. Throughout his range, which extends from New England to Florida and across to the Mississippi River and Texas, he is variously called eastern pickerel, eastern pike, green pike, jack, true pickerel, duck-billed pike, lake pickerel, pond pickerel, grass pickerel, and chain pike. The "chain" in his common names, and the *reticulatus* in the scientific discrepancy, refers to the pattern of coloration, which is a gold network of interrupted links on a green background, lightening towards the belly. Additional identification markings are a series of dark lines behind the eyes, and the fact that the gill covers are completely scaled. The scaled gill covers are the most assured means of distinguishing the pickerel from young pike or muskellunge, since in the dark waters of acid lakes and ponds the chain pattern and dark lines may not be evident.

So the chain pickerel is a beautiful fish, a fish of many names and wide distribution, and a great fighter that can add some real excitement to a bass fishing trip. But how does one go about pursuing the tiger of the tangles for his own sake?

The trick to locating pickerel is *structure*, just as it is in bass fishing. But structure that holds pickerel is not quite the same as that which provides the bass action. In the first place, un-

less you are fishing with bait through the ice, rule out all water over five-feet deep. The pickerel is a creature of the shallows, and the more tangled the shallows are, the greater the chances of pickerel being present.

Even in the shallows, however, one can't merely apply bass-locating techniques to the pickerel. The fish's torpedo shape has a lot to do with the cover in which he'll be found. For example, bass will frequently lie up against a stump, awaiting the passage of food; but, just a plain stump won't necessarily draw a pickerel. The pickerel likes to lay his long body against something, generally a log, fallen tree, or grass bed. He also "aims" his body toward the most likely passageway for food, so a grass bed or fallen log extending towards a channel in shallow water is a likely spot to look for him.

In general, the pickerel stays close to shore, so that it can see and attack anything that passes by. In the absence of logs and trees, look for beds of rushes in the water and especially for narrow channels in those beds. Pickerel will lie in those channels watching the water outside of the beds; therefore, casts should parallel the beds in open water, as close to the reeds as possible, in order to garner the most strikes. In a reed bed situation, where no channels are discernible, make random criss-cross casts through the reeds, working every square inch of cover as closely as possible. Pickerel in such situations will certainly move to attack a lure, but they won't move far, since food in that sort of cover is extremely plentiful.

In some lakes where pickerel are found there is no noticeable cover, and the shores, although reedy, offer no grass in the water itself. In cases such as this, look for points and coves where the water is shallow a few feet from shore and then drops off abruptly. Unless you have a structure map of the lake or pond, this sort of fishing calls for a prospecting trip before hand, since moving the boat in close enough to sound for the drop-offs will spook the fish.

A lake such as that, with points leading to drop-offs, is a good place to start talking about lures. In that sort of situation, a floating-diving plug such as the Rapala-type minnow plugs



A quartet of pickerel that gave this Pennsylvania angler plenty of action.

is one of the best choices. Make the cast as close to shore as you can without actually snagging the shore, and reel slowly, with frequent twitches of the rod tip, to a point about two feet before the drop-off. Allow the plug to float to the surface periodically. If a pickerel is there, and doesn't strike at what it assumes to be an injured minnow, it will probably follow the plug, since pickerel are extremely curious fish. Therefore, when the plug ap-

proaches the point where the water gets suddenly deeper, reel rapidly! The plug will dive deeper, as though it were plunging toward the safer depths, and the following pickerel will generally shoot ahead, throwing a V-wake behind him, and nail the plug before it can "escape." I have only had this technique fail me once. There was a sudden boil in the water three feet in front of the V-wake and the plug was engulfed by a bass that had been lurk-



Lily pads, reeds, submerged tree stumps — ideal pickerel habitat but a real threat to a tackle box without weedless lures

ing below the drop-off and had risen to take the plug which had just shot into its domain. The pickerel that had been chasing the plug was probably as surprised as I was.

In all other pickerel fishing situations where there is heavy cover, a weedless lure is called for. In many cases you can get by without one, especially in reeds where, if your line is strong enough, you can pull the lure free. Nevertheless, there aren't many real minnows and frogs that snag their smocks on trailing vegetation, and pickerel, being carnivorous, won't attack a traveling salad.

There aren't too many weedless plugs on the market, but there are quite a few good weedless spoons and spinners, and since pickerel seem attracted to fast moving, flashy lures, the spoons and spinners are a good bet for most types of pickerel fishing. For a long time the old standby was the red and white Daredevil spoon and its imitators, but that large, free-swinging treble hook made the spoon a *real* devil to work in the tangles. However, there are now Daredevils on the market with a fixed single hook and weedguard, and they are as effective as anything else. Aside from the conventional red and white Daredevil types, stick to silver and gold finishes rather

than the more esoteric blues, greens, and polka dots.

Soft plastic minnow imitations are also quite effective, and many of these are now being produced in weedless varieties and with or without spinners attached to provide an attention getting flash. If you have some of these without weed guards, half-hitch a rubber band around the eye of the hook, ahead of the body of the lure, and stretch it back, hooking the other end behind the barb. Remember to carry spare rubber bands in your tacklebox, however, since the first pickerel caught will shred the rubber band to pieces with its sharp teeth.

Two more words on the subject of those teeth: use wire leaders, or at least a shock leader of 30 pound test monofilament; and be careful taking the hook out of the fish's mouth. The wire leader won't affect the action of the lure enough to turn a pickerel off, and it will save many a fish and many a lure that would otherwise be cut off by the sawing action of the teeth during the fight. When a pickerel starts shaking its head, its teeth act just like a rip saw.

Carry long-nosed pliers or some other gripping device to get the hooks out. The teeth are hazard enough when using a single-hooked rig, but when

you couple those teeth with two swinging trebles and a thrashing fish, you would be safer selling cookware to cannibals. Keep your hands as far away as possible while still getting the hook out.

And, if the lures don't work, you can always try drifting a minnow on a small bobber. The excitement of this sort of fishing can be as great in another way, since a pickerel will often scale the minnow on the bobber, tugging at it without really mouthing it before it's ready to eat. When you consider that the pickerel may work at the minnow for up to five minutes while you sit and watch, you can readily see how the tension can build to an almost unbearable pitch. In this sort of fishing, cast the minnow and bobber into holes in reed beds, weed beds, and patches of lily pads. Then just sit back and wait.

Pickerel really start biting when the season opens in May, having kept to the deeper water under the ice during the cold months. But, when the waters warm as the summer progresses the dark torpedo shapes begin stationing themselves along the food routes; and, to the man with the proper technique and the proper amount of love and respect for the tiger of the tangles, it is the "sweet of the year."

CO-OP NEWS

by Bill Porter

Continuing the centennial review of the first hundred cooperative nursery articles, not everything was light, happy, different, or innovative. Problems beset most of the clubs sooner or later as the years have passed. But in spite of most adversities, the general thread of endurance, or bouncing back, seemed to permeate all sportsmen connected with the program.

Obviously, water, peculiarly enough, presented the most problems. For some clubs, there was not enough of it. The Marysville Sportsmen, Perry County, built what was called a "plumber's nightmare" at their first site when the flow dropped below 12gpm. Metal skirts, funnels, and even the sweat off the brows of the workers were employed to catch every last drop of water just to keep their fish wet.

And sometimes too much water created even more severe troubles for the embattled nurserymen. The climactic period to date has had to be *Agnes* in the late spring of 1972. Nearly thirty nurseries lost all of their fish; others lost half or more; and several nurseries were completely destroyed. Most suffered physical damage in one form or another. As an example, the Upper Dauphin County Conservation Club, using water from Rattling Run Creek, had its raceway filled with huge boulders that required heavy equipment and a lot of man-hours to remove. The site

looked as though it should have been abandoned — instead the club rebuilt and is back in business at the present moment.

And there were the spinoffs from *Agnes* — Carbon County's Youth Forestry Camp #2 nursery, for example. The unit was not damaged by the high waters but lost all of its fish as the excessive runoff affected the pH of the water. Mechanicsburg Sportsmen, Cumberland County, had its fingerlings scattered over a mile of stream when rising waters liberated them. An exhaustive seining process recovered most of the young trout. Both clubs are back in business and have been for some time.

But not all of *Agnes* was bad. Lessons were learned. Construction was improved; the value of good screens properly fastened was established; and the clubs with diversion systems for excess water proved their points. Many outfits revised their nurseries and new clubs took heed of some lessons learned the hard way.

There were other water problems, too. Nitrogen was an issue for a number of clubs with "pop eye" developing in the growing trout. Aeration devices had to be constructed or bought, and again there were those inventive minds coming to the fore. The Greencastle-Antrim High School nursery, Franklin County, lost fish until an electric line and a minnow-saver was rigged at the outlet of the spring feeding the nursery. The Windber Sportsmen, Somerset County, built some step aerators to solve their problems. And the Consolidated Sportsmen of Muncy Creek, Lycoming County, devised an aerator of water splashing through a series of screens for one water source and added a minnow-saver to another source to keep quality water flowing through its one nursery.

Their other site had no nitrogen problems.

Other problems, not directly related to water quality or quantity, have plagued the cooperative nurseries over the years. Predator problems have required a lot of attention and have had to be considered from two angles, the non-human ones and, unfortunately, the human ones. Kingfishers, water snakes, mink, and even a bear — the latter giving the Farnsworth Trout Club some problems at its Warren County location — were on the list. As a result of the natural predation, screens were better constructed; some earthen raceways vanished to be replaced by cement block affairs, and a variety of legal trapping devices were put into action.

And perhaps the worst problem of all — at least in the minds of the sportsmen — has been the one of human predators and vandalism, which seems to be on the increase in spite of precautions to the contrary. Fish have been stolen and sold commercially; others were borrowed for a "fish fry"; a few were taken and entered in contests for trophy fish and prizes. One club had 3,000 trout deliberately poisoned and there was a similar suspected case at another nursery in another county. Some clubs have had buildings damaged, fish shot and left lying, screens smashed with no intent to steal the trout, and other related evidence of human weaknesses could be listed.

The product of all of these deliberate violations has only served to strengthen the concerns of the sportsmen running the nurseries. They are there for a purpose — to serve the fishing public and provide themselves with a very worthwhile project — come hell, high water, or some clown with a bolt cutter!

Some clubs which had reason to quit after "Agnes," like the Upper Dauphin County Conservation Club, DIDN'T!





A Guide to

Raystown Lake

*Pennsylvania's newest, largest,
fishing and boating paradise*



Introduction

by James F. Yoder, Editor

Not every boater or fisherman in the Commonwealth will find the time, or perhaps have the inclination to visit Raystown Lake, Pennsylvania's largest inland wilderness waterway, this year . . . some might never make the trip for one reason or other. Even so, those who do will scarcely find time to thoroughly enjoy but a few of its innumerable bays and coves on a single trip. Boating sightseers can perhaps see more of picturesque Raystown in one day than the average fisherman will in the course of weeks of deliberate exploration, seeking out his prey. Larger, more powerful craft will unquestionably open up the entire impoundment to camping, fishing, cruising, waterskiing . . . whatever strikes the boatman's fancy . . . than will smaller, slower craft.

I speak from firsthand experience . . . I tried fishing Raystown from a lightweight canoe, a joy to cartop and carry to water's edge. Raystown had not reached full recreational pool . . . motors were not yet permitted. We put in at Snyder's Run and the opposite shore looked appealing, naturally; but, for the most part, my keelless craft chose its own course across the lake not unlike a fallen leaf drifting in a breeze. It was almost completely oblivious to my paddle's command; getting there took some time and considerable effort!

So, though much of my day was spent fighting a mismatched combination of wind and aluminum, the largemouth bass in one of the coves erased the drudgery of getting there. No lunkers, but they made up for their size in numbers. Some were scarcely longer than the surface chuggers we were using, but they were

Raystown twists like a serpent for some 30 miles; thus it can be viewed in its entirety only from the air. Staff Photographer Russell Gettig portrays Raystown's immensity both here and on the two preceding pages.



not to be denied! Some approached a foot. Ours was a one-day excursion (not to be recommended!); and, the action which was limited to the end of the day was fast, furious and short-lived . . . fun, too.

Two things became immediately apparent: Raystown was going to become some kind of fishing paradise, if the antics of those bass were any indication. Secondly - and this is the unfortunate part - unless one were retired, unemployed (but with funds adequate for one's needs, pleasures, etc.), or had the good fortune to be committed to less time in pursuit of the dollar than most of us; and, further, unless one had a good fast boat or an easily trailered affair, much of Raystown was going to go unfished! Any available combination of the aforementioned enviable circumstances would add immeasurably to the enjoyment of fishing at Raystown Lake.

Those intervals between bites were spent pondering the similar bewilderment of newcomers to the area. Some of my "first trip" problems have since been eliminated with the purchase of a larger boat, motor-equipped and easily trailered. Too, new launch areas have become available thus opening up many of those formerly too-distant coves; but, it's still going to be "miles" from some ramps to some coves . . . fewer of them now, of course. Three boat-to-shore campgrounds are going to amplify Raystown's already wilderness-like atmosphere for those who choose this way of leisure . . . and what a way it is to go camping and fishing!

So it was that not less than five of my fellow writers/photographers journeyed to Raystown Lake, each sharing a "Now, where do we go from here?" experience in varying ways. Sharing these experiences with Angler readers are writers Fredric Doyle, Sam Hossler and David Thompson. Huntingdon County Waterways Patrolman James T. Valentine adds his "on-site" expertise, giving us Raystown as it is today with a prediction or two regarding what is planned for (and expected of) Raystown in the days ahead. Augmenting the narratives of these writers are photographs by Fishing Outlook columnist George E. Dolnick, Jr., and PFC Staff Photographer Russell Gettig. Our special thanks to the U.S. Army Corps of Engineers for technical data used in this feature.

Boaters are shown here returning to Snyders Run, one of the smallest of Raystown's boat launching areas.



“RAYSTOWN COUNTRY”

A short report from the field

by Waterways Patrolman James T. Valentine

Southcentral Pennsylvania is known as the ridge and mountain area of the Commonwealth. Take the beautiful topography of Huntingdon County, located within this area, build a dam breast across the Raystown Branch of the Juniata River, impound 8,300 acres of clean clear water, and you have Raystown Lake, one of the most beautiful recreational areas that God and man ever combined to create.

This is what we call “Raystown Country,” and I consider myself very fortunate to administer this area as part of my duties as waterways patrolman for the Huntingdon County district.

We of the Pennsylvania Fish Commission started to get excited about

the recreational potential of Raystown Lake back in 1972 as the mammoth earthen breast neared completion. We knew what we had at the moment, and a fair idea as to what would be needed in the future if we were to help develop this area to its optimum potential for recreational fishing and boating.

What we had was a source of high quality water with little threat from industrial pollution. We also had an existing 600-acre lake located within the new pool area that had a fine population of many species of game fish. This, then, would provide the nucleus from which to manage the fishery that was about to develop.

What was needed was a preliminary management plan. The

Management Section of the Pennsylvania Fish Commission was aware of the large “void” that would be created by the newly impounded waters. In order to help mother nature along, within a three year period we stocked over 22 million fry and fingerlings which included large-mouth bass, northern pike, walleyes, muskellunge, tiger muskellunge, striped bass, and brown trout.

The true success of our efforts to date will be known only after a scientific survey of the lake, scheduled for this year, has been completed. Fish Commission biologists will set nets to determine population census, growth rates, and gain other such valuable information. All data collected will be studied to help establish a long-range management plan for the lake and to determine if additional stockings might be necessary in the future.

Unofficially, however, personal observations and reports from fishermen indicate good reason for optimism. Excellent catches of

largemouth and smallmouth bass up to five pounds were reported last year. The striped bass have survived introduction to their new home; and, so far, are exceeding the average growth rate for this species. Stripers, eighteen-inches long and weighing over three pounds have resulted from the initial plantings in 1973.

For those who prefer panfish the results of the first year have been most encouraging. White crappies and bluegills of jumbo size are showing up in large numbers. Best catches of these species have occurred in the early part of the season from mid-April through July.

Raystown Lake is proving to be a natural for the boater. Since much of the 110 miles of shoreline is inaccessible by automobile, it's obvious that most of the fishing is done by boat. Those who cruise for pleasure, water-ski, canoe, or use wind-powered sailboats are finding this to be an excellent boating area.

Being a new recreational area, Raystown Lake is in the process of development by the U.S. Army Corps of Engineers. Many of the facilities such as marinas, gasoline supplies, repair services, etc., were not available to visitors in 1975. It is expected that these facilities will be available during the 1976 season.

Working closely together, the Pennsylvania Fish Commission and Corps of Engineers developed a "buoying plan" for the lake that we felt was necessary in order to permit optimum usage of the area, and minimize conflicts of interest. Many of the back bay areas have been buoyed and designated as "NO WAKE ZONES." This plan, it was felt, would permit those who would fish, sail, canoe, or look for more quiet areas, some comfort from the water-skiers or other fast boat operators. This proved to be most successful during the first year with the faster moving boats making use of the main channel areas.

In conclusion, we might make the following suggestion: If you are looking for a new lake with beautiful water located in a natural rugged setting, or a fine fishing lake with a rapidly expanding fish population — try "Raystown Country." We're pleased with the results, so far, and expect better things in the future.

"BASS" is a relatively new organization in our state even though it has been well established throughout the south for years.

During the past year I've had the opportunity to work with members of the Pennsylvania BASS Federation on several different occasions. Bass fishing tournaments were held on Raystown Lake during the summer and late fall.

For those who haven't had the opportunity to observe a BASS tournament, let me recommend that you make it a point to do so. To be at the weigh-in area at finish time is exciting. The beautiful, well equipped bass boats, the first class fishing tackle, and the members all decked out in their colorful jump suits are interesting to observe. The bass these gentlemen bring in to record will make your eyes pop out. Incidentally, all fish are kept alive in fresh water live wells and released in fine condition after being weighed.

These gentlemen are to be highly commended for their excellent attitude toward boating safety. All occupants wear approved PFDs while the boat is underway, all boats are equipped with a "kill switch," etc. Their effort to improve their sport, using all modern conservation techniques, is also noteworthy.

W.P. James T. Valentine





Bank fishing is the preferred sport of many—including members of the “fairer sex” making the trip to mighty Raystown Lake.



RAYSTOWN

The Lake of Tomorrow

by Fredric Doyle

The bobber jiggled, then dived under, with the line slicing the water in its wake. With the tense expectancy of a cat watching for a mouse to reappear at a knot hole, I waited for the cork to bob up. Under the old rules you waited for the second run, waited for the bobber to reappear, pop up, then go under again before setting the hook. The theory, of course, was that the bass grabbed the bait, made a short run, then paused to turn and swallow the minnow head first.

The bobber reappeared, then tilted listlessly on the rippling water. Waiting several minutes, I reeled in only to find the minnow mauled, half-scaled, with the tail bitten off. Rebaiting with a fresh minnow I tossed it out and watched the float cut circles as the shiner executed lively gymnastics. The next time the bobber went under I jerked, not waiting for the second run, only to retrieve an empty hook!

I have always been partial to bobbers. There is always the same thrill, comparable to the bulge and disappearance of a Royal Coachman on a swift slick on a trout stream, when a bobber suddenly goes under and

streaks out of sight. Now, something was wrong; the order of things changed. These bass were not playing according to the rules of the game. Or was it the time and the place?

The place had been selected an hour or so before as I stood on the Coffee Run Overlook of Raystown Lake, the largest lake wholly within the Commonwealth of Pennsylvania. It was October and Pennsylvania was wearing her cloak of many colors. The leaves of the hard maples were gold. The oxblood of the red oaks, blending with the reflection in the water of the egg yoke yellows of the hickories, created a blazing mosaic until a power boat shattered the image. Directly across the lake from the point where I stood was the Tatman Run Access Area. Several anglers were sitting along the shore. The boat cut a furrow through the lake, sending shock waves which rocked the bobbers of the anglers. I learned later that this action sometimes attracts the fish to the bait.

Driving about a quarter of a mile down the road on Rt. 994 I stopped on the Entrioken Bridge which crosses the main channel of the Raystown Branch of the Juniata River. Here I met several anglers who had parked their cars on the bridge.

“What luck?” I asked.

“Fair,” they said, but went on to say that since the Army Engineers had lowered the level of the water in the lake to construct boat launching ramps, the fishing had not been so good.

“Where was the best place to fish?” I asked.

Each had an answer: for carp and catfish, the north bank of the lake near the Entrioken Bridge; for bass, in the deep water near and under the bridge; for crappies, yellow perch and bass, anywhere along the brushy shore. For a combination of fishing and picnicing the Tatman Run Access Area was equal to any point in this area.

To reach the Tatman Run Picnic Area from the Entrioken Bridge, I continued south on Rt. 994 about a mile, then turned left just after crossing the small Tatman Run bridge. A dirt road led to the picnic area where tables, fireplaces, and rest rooms had been constructed. While the project is not yet completed most of the facilities are available for a day's recreation. Camping overnight is not permitted.

Talking with two resident anglers there who were sitting just below a picnic table, I asked them about their luck. They lifted their live fish bag which contained five or six carp, several yellow perch, and some catfish. For bait they were using nightcrawlers and whole grain corn. Carp being a rather controversial fish, classified as trash or as a delicacy by gourmets, I asked these men what they intended to do with them.

“Give them away . . . or maybe

take some small ones home," they replied. They went on to say that carp were as good as catfish or perch — if properly cleaned. When I turned to go they offered me as many of the carp as I wanted. Thanking them for their kind offer I said that I had hoped to catch some bass.

Before arriving here at the Tatman Run Picnic Area I had visited the Raystown Lake and Dam Headquarters of the Army Engineers where the reception was very cordial. A brochure with a map of the lake was furnished along with much general information. They informed me that the lake had been stocked by the Pennsylvania Fish Commission. Brown trout, bass, pike, muskellunge, and striped bass were among the species stocked.

Most impressive was the fact that the Raystown Lake has more than a hundred miles of shore line, elbow room for every licensed Pennsylvania angler on any given day, within 30,000 acres of federally controlled drainage area where hunting, fishing, boating and other recreational activities are welcomed. Following the suggestion of a ranger there, I visited the Weaver Falls Access Area near Saxton where a boat launching project was under construction. Picnickers and anglers were mingled with the workmen. At the Shy Beaver Boat Launch, several miles along the way, the boat launch was in operation. Several parties were gathered there for a maiden voyage. All of the points of access to the lake, including the Coffee Run Overlook, were well-marked on Pennsylvania Route 26 between Everett on Route U.S. 30 and Huntingdon on Route 22.

To enjoy a more secluded place I walked about a half mile to a point directly across from the Entriken Bridge Overlook where the Tatman Run empties into the lake. Here the bank drops off at about a 90 degree angle, then slopes to a flat bar as it rounds the bend. I chose a place midway between these two points which was relatively free from brush. I was not alone. As I snapped some pictures I was wondering what our friend Izaak Walton would have thought to see his "*contemplative man's recreation*" invaded by feminine anglers. Yet, Mr. Walton did observe that, "*upon reading Plu-*

tarch, he found that Angling was not contemptible in the days of Anthony and Cleopatra, and that they, in the midst of their wonderful glory used Angling as a principal recreation."

The next time the bobber went under I brought in a ten-inch bass . . . then lost several more. Switching to nightcrawlers brought no more success. Then hardware . . . whipping the water to foam, almost, with a rapala, but there were no takers. Then back to live minnows and again the action started. After an hour or so, with four minnows left in the bucket from the two dozen that I started with, and two black bass and a crappie on the stringer, my day's angling ended. But not my "con-



STATISTICALLY SPEAKING—

The design plan provided for the construction of an embankment dam, a spillway consisting of both gated and ungated sections, and warm water outlets. The dam is 1700 feet long and 225 feet high. A two-bay, gated spillway is located on the crest of the right abutment about 700 feet from the end of the dam. Warm water outlets are located in the center pier of the gated spillway to discharge the required flows. The ungated spillway extends for 1630 feet along the crest of the spur. A tunnel through the right abutment diverted the river during the construction period. This diversion tunnel penetrates the right abutment spur at a point about 2600 feet from the right abutment of the dam. Valved passages through the tunnel plug will permit reservoir drawdowns to pool levels approaching the tunnel intake elevation 622, depending on rate of inflow. A tower providing access to the valved passages in the tunnel is located on top of the ungated spillway.

This portion of the project, the dam and all its appurtenances is complete. Total cost of the dam was approximately 21 million dollars. The public use facilities at the dam; visitor displays, parking area, and comfort station are open to the public.

WATER QUALITY — Benefits for downstream water quality are achieved incidentally through the normal operational releases of the reservoir storage. Normally, flow in the Raystown Branch of the Juniata River falls below 480 cubic feet per second (cfs) during dry periods which occur in mid-summer and early fall. When the natural inflow into the lake falls below the 480 cubic feet per second figure, waters are released from the lake to maintain a flow of not less than 480 cfs in the Raystown Branch of the Juniata River below the Dam. This is accomplished by lowering the lake's level, however, this will not normally adversely affect the recreation on the lake as

templative day." Before the season ends I will return to Raystown Lake at the Entriken Area with a bucket of shiners, my spinning outfit and some sliding sinkers. With a minnow on the hook, six inches or more near the bottom of the lake just beyond the sliding sinker and the spinning bail open, there will be no resistance when a bass strikes, and so it will end up in the frying pan. We hope!

While Raystown Lake was constructed primarily as a flood control project, it will not hold back the deluge of anglers, picnickers, and vacationers when more access roads and other recreational facilities are completed, and as it becomes better known.

the boat launching facilities were designed to provide for continued operation with the lake at less than its recreational pool.

By maintaining a 480 cfs minimum flow, water quality and associated fish and aquatic wildlife benefits are realized on the Juniata River below Raystown Lake and on the Susquehanna River below its confluence with the Juniata River. The 480 cfs will provide a substantial increase over the 100 cfs or less which might otherwise be experienced during dry periods.

RECREATION — The dam impounds an 8,300 acre, 30 mile long lake of high quality water in a section of the country that is lacking in large recreational water areas. This lake, with its 110 miles of shoreline, is the largest lake wholly within the Commonwealth of Pennsylvania. The project is within easy driving distance of some 15 million people, and provides facilities for picnicking, camping, swimming, boating and other recreational uses. Attendance at the project was almost half a million in 1975. Benefits from the recreational facilities provided by the project are estimated to be better than \$2,000,000 annually. The U. S. Army, Corps of Engineers has full responsibility for supervising, operating, and managing the park recreational facilities.

BOAT LAUNCHING —

Four major areas designed specifically for boat launching; Snyder's Run, Seven Points, James Creek and Shy Beaver. These areas are provided with parking, drinking water, comfort station, and a concrete ramp suitable for launching boats of all sizes.

Three other boat launching facilities; Aitch Access, Tatman Run Access, and Weaver Falls provide access to the lake but are more suitable for the launching of smaller boats. These areas provide ample area for shoreline fishing and picnicking. A small boat launch ramp, picnic tables, a comfort station, fire



grills, and parking facilities are available at these access areas.

PICNICKING —

Facilities are provided for fishing, picnicking, and the launching of boats into the Raystown Branch below the Dam at the Corbin Island Fishing Access and Schoolhouse Fishing Access.

In addition to the picnic facilities provided at the access and fishing access areas, mentioned above, the Cliff's Picnic Area, located near Marker 7, provides tables, fire grills, and a scenic view of the lake.

CAMPING —

Two campgrounds suitable for tents or small trailers offer more primitive accommodations, free of charge. The Branch Campground is located on the Raystown Branch of the Juniata River below the dam along TR 430. Susquehannock Camp is located on the lake at Marker 7 and is accessible by vehicle.

For those wishing to camp by boat, three boat-to-shore campgrounds have been provided; Nancy's, Putt's and Peninsula Camps are located at Markers 16, 26, and 24 respec-

tively, and offer fire rings or grills, comfort station, and with the exception of Peninsula Camp, drinking water.

TRAILS & OVERLOOKS —

The Terrace Mountain Trail provides hiking from Highway 994 to the Weaver Falls Bridge. This trail is approximately 9.4 miles long. Backpackers may overnight at Putt's or Peninsula Camps.

The Ridenour Overlook, Coffee Run Overlook, and the Entriaken Overlook provide scenic views of the lake.

Seven-Points Recreation Area

Seven Points is one of the facilities, which the Corps of Engineers has developed, for the use and enjoyment of the visiting public. Facilities located within this multiple-use recreation area include a boat ramp, a marina, a swim beach with bathhouse, picnic sites and campgrounds.

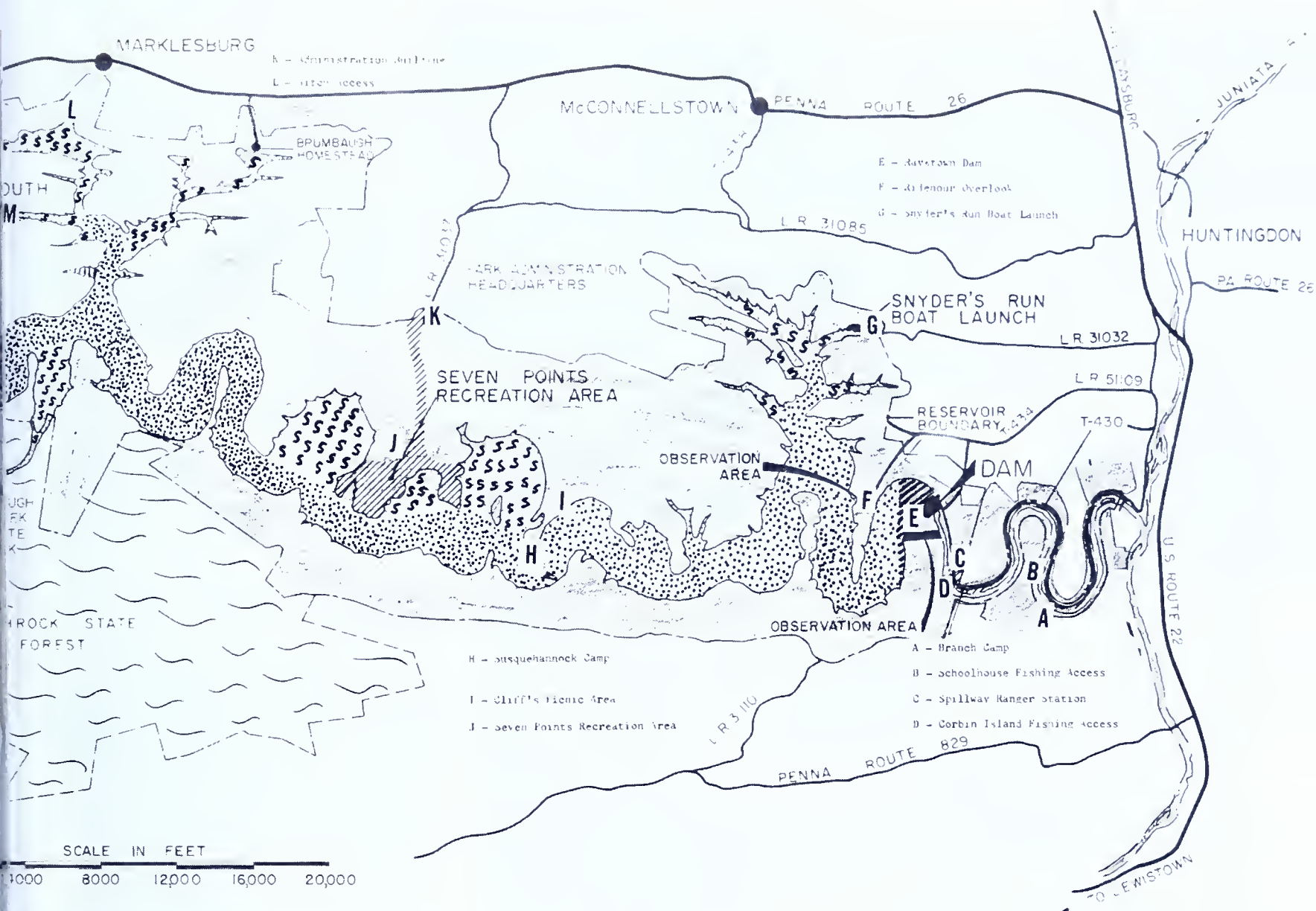
BOATING — The Seven Points Boat Ramp permits easy launching for the day-use visitor and campers. Limited marina facilities and services are expected for the 1976 season,

with expansions scheduled according to the demand.

SWIMMING — The beach is a popular site, especially on warm summer days. For sanitation and safety reasons pets are not permitted on the beach nor in the vicinity of the bathhouse.

PICNICKING — Hundreds of picnic sites and two picnic shelters are available within the Seven Points Area. The shelters are operated on a reservation basis and can accommodate approximately 50 persons. Day use visitors are not permitted to use camp sites for picnicking. All day users must park within designated parking areas.

CAMPING — Within the Seven Points Recreation Area, overnight stays are permitted only at the 110 designated camp sites. All sites are operated on a first come first serve basis with stays limited to 14 consecutive nights. Campers must stop at the Ranger Station, upon entering Seven Points, to pay the required fee and to secure the necessary permit. Campers must park vehicles on the



RAYSTOWN LAKE

gravel spur at the camp site and two vehicles or one vehicle and a trailer are limited to each site.

Firewood is available throughout the area but only the dead and down may be utilized by the visitor. Camp fires must be contained to the designated firegrills. Water hydrants are provided throughout the campgrounds, but dishwashing and personal cleansing are prohibited at these locations. Others will experience a pleasant stay in the outdoors only if fellow campers observe the quiet hours between 10:00 p.m. and 6:00 a.m., and do not litter, cut vegetation, or drive nails into trees.

FISHING — Anglers may fish the entire Seven Points shoreline except at the beach, boat ramp, boat tie-ups, marina or areas posted by appropriate signs.

HUNTING — Hunting is prohibited within all public use areas including Seven Points. Hunters are urged to secure all firearms in the vehicle or camping unit when not in use.

Branch Campground

A primitive drive-in campground has been

developed along the banks of the Raystown Branch. This area is located approximately three miles downstream of the Raystown Dam and is suitable for tents and small trailers. Access to this campground is via T.R.-430.

Schoolhouse Picnic Area

A new picnic area has been developed along the River Road (T.R.-430) below the dam. This facility is located a short distance upstream from the Branch Campground.

Hawns Overlook & Trail

The Hawn Overlook provides a magnificent view of Raystown Lake and the surrounding countryside. A trail, which is approximately one quarter mile long, connects the Hawn Overlook with the parking lot at the Ridenour Overlook.

Susquehannock Campground

Camp sites, which are suitable for tents and small trailers, have been constructed along the shoreline near marker 7. This campground is reached by traveling in a northeasterly direction from the Headquarters Building over Township and Corps roads.

Aitch Fishing Access

A boat ramp, designed to accommodate the smaller vessels, has been developed in James Creek Bay. This access is located one mile east of the intersection of Pa. Rte. 26 and L.R.-31079 intersection in Marklesburg, Pa.

Peninsula Camp Boat-To-Shore

Another boat-to-shore camp has been constructed at the Raystown Lake Project. Campers arrive at this camp, which is located near marker 23, either by boat or on foot.

Terrace Mountain Trail

Hikers can follow a marked trail from Weaver's Bridge to Pa. 994 along the right bank of the lake. Easy access is provided to Putt's and Peninsula Camps for backpackers.

Weaver Falls

Located one mile downstream from Weaver's Bridge on LR 31019 this facility has been improved to include a new concrete boat launch ramp for smaller vessels and parking for 42 vehicles. Thirty picnic tables, twelve grills and a comfort station have been provided.



George Dolnack displays a few crappies for which Raystown Country has always been famous! On ultralight tackle, they're sporty little battlers!

RAYSTOWN . . .

Pennsylvania's Largest Lake

by David R. Thompson

When the panfish begin hitting in the spring at Raystown Lake in Huntingdon County, the good word spreads as rapidly as wildfire in "Raystown Country." But now it was November and, unfortunately for me, other exciting outdoor news had traveled just as quickly . . . wild turkeys had been discovered on a ridge overlooking the lake!

I should have known better than to breath a word about jumping those three regal birds. Had I kept my big mouth shut I might have persuaded someone to don his long underwear and accompany me fishing. However "turkey fever" is widespread in this region in November and I found myself alone, searching for one of the fishing hotspots described by local anglers familiar with this new, immense lake.

It was a cold, windy morning when I arrived at Raystown Lake. Up until

then the fall weather had been unseasonably mild and anglers in "Raystown Country" were making excellent catches of bass, walleye and muskellunge. The Raystown Country Fall and Winter Fishing Contest was in full swing, and the "Daily News" reported on November 14 that a 20-inch smallmouth, a 41-and one-eighth inch musky and a 24-and one-quarter inch walleye were among the weekly contest winners.

Naturally when I read about those impressive catches I forgot about the inhospitable weather and concentrated on learning where I should fish to share in the area's piscatorial bounty. I also began to search for someone willing to put his turkey gun in the gun closet for a day and limber up his rod instead.

I might have succeeded in persuading Waterways Patrolman Jim Valentine to take time out for a

few hours of cold fishing had it not been for the turkeys. But after Jim saw them fly off the ridge ahead of us almost within shotgun range, it seemed as if his thoughts were with the birds the rest of the day. I concluded that if he were to take time off from his duties for *pleasure*, he would prefer to follow that last turkey which cupped its wide wings and sailed beautifully to a place on the ridge behind us.

My thoughts, however, focused on learning about Raystown Lake and the outdoor recreation available there. It appeared as if I'd have the entire lake to myself.

Jim and I were standing at Ridenour Overlook at the northeast end of Raystown Lake just before we spooked the turkeys on a nearby trail. The overlook offered a spectacular view of a portion of the lake with the tall Terrace Mountain in the background.

"Everytime I look out over the lake from up here I'm impressed by its beauty," Jim commented. *"You should see it here when the leaves are turning. It's really beautiful then."*

I stood quietly and tried to share in the man's feeling for the huge lake. It stretched southwest as far as I could see. I knew from studying maps that the lake was many, many miles long with numerous fingers and coves. I felt somewhat like the country boy lost in a big city. At home, the lakes were mere puddles compared to

Raystown Lake. Before me were 8,300 acres of water and just where to find fish was a question that Jim answered in a manner that almost discouraged me.

"You know, they say the fish in the lake such as this are located in about ten percent of the water where they have optimum living conditions," he said. "It's a place offering good oxygen content, the right water temperature and good cover."

I waited on pins and needles for him to point to a particular place and announce that there I'd find the place the fish called "Utopia." Instead, Jim huddled deeper into his fur-collared coat and pointed to a red-tailed hawk as it flew with the wind across the lake.

From our vantage point at Ridenour Overlook, we had a clear view of the dam forming the lake. Beside it were the outlet works and a large, ungated spillway seeded to grass. It was there on the ungated spillway that President Gerald Ford, then vice president, landed in a helicopter to participate in dedicating the new impoundment constructed by the U.S. Army Corps of Engineers.

The Raystown Lake project, authorized by the Flood Control Act of 1962, has already fulfilled its primary purpose to reduce flood-caused damage along the Juniata and Susquehanna rivers. At the same time, the lake provides numerous opportunities for outdoor recreation to some 15 million people living within easy driving distance. Fishing, boating, camping, swimming and picnicking are among activities available at the lake estimated to cost twenty million dollars.

The dam forming the lake is located on the Raystown Branch about 5.5 miles upstream from its confluence with the Juniata River. Above the dam, the flood control pool (Raystown Lake) extends for 34 miles to the vicinity of Saxton. The recreation lake is 27 miles long, with 110 miles of shoreline. This makes Raystown Lake the largest lake wholly within Pennsylvania.

My problem was reducing the huge lake down to fishable size. Where should I begin? With 8,300 acres of water to explore there would be no problem finding ample elbow room. In fact, I was beginning to wish



Rev. Harry Price hoists aloft a mixed catch of Raystown panfish.

it was the opening of bass season when Jim said the entrances to the boat ramps were crowded with anxious anglers.

"There were two tournaments here this year: one in August, and one in October," Jim remarked. "They took some three- and four-pound bass."

The Pennsylvania Fish Commission is optimistic that practically every species of fish stocked in the lake between 1973-1975 will adapt well. Species stocked include largemouth and striped bass, muskellunge (including the tiger), northern pike, walleye and brown trout. The lake also contains chain pickerel, yellow perch, crappies, bluegills and many other species of fish which all inhabited the branch and old Raystown Dam that was inundated by the new impoundment.

"I'm aware of a twenty-six-inch chain pickerel being caught this year," Jim continued, "and I wouldn't

be a bit surprised if a state record pickerel comes out of here eventually. There's been a real explosion in the numbers of both pickerel and perch."

Even though catches of some species at the lake have been noteworthy, fishermen are still in the process of learning how to best fish the relatively new impoundment. Jim said, *"It will take a few years until the fish establish patterns and people learn them."*

The waterways patrolman also explained that as of 1975 the lake had not stabilized due to drawdowns to enable the U.S. Army Corps of Engineers to construct more boat ramps. Once the lake becomes stabilized anglers will be better able to determine where and how to catch fish.

"When we fish the lake for bass, we often work the rock points," said Jim, who formerly specialized in muskies. He concentrates on brushy



areas for bluegills as does avid angler Charlie Hess of Huntingdon who, according to Mrs. Hess, is "thrilled with Raystown Lake."

Using his flat-bottomed, sixteen-foot boat, Charlie, his wife, and teenage son, often fish Raystown Lake as a team. *"We really had a ball last spring fishing for crappies,"* he told me, adding that twelve-inch crappies are not unusual.

A lure that has produced panfish well at Raystown Lake is the split-tail, Charlie said. He and his son make their own split-tails of soft plastic one and one-half inches long on a number 4 hook. A small split shot can be attached to the hook below the eye to make the lure heavier. *"Fish seem to hit a yellow split-tail real well,"* Charlie said.

Having a knowledge of the area before it was flooded gives Charlie and other Huntingdon area residents an advantage when it comes to knowing where to fish. *"I remember where pines grew before the lake was made and fish those places for panfish,"* he said. *"Of course, when we're using split-tails bass hit them sometimes."*

Francis Kemp, who keeps Huntingdon County anglers informed of

goings-on at the lake through county newspapers, maintains a watchful eye on the day-to-day fishing possibilities at the lake. He agrees with Charlie that the crappie fishing is tremendous.

"I've filled a bucket with them in the spring with no trouble," he said. He often uses white and yellow shad darts with success and works the lures in a jerky motion.

Around the beginning of May bluegills also start hitting consistently. Among the anglers who visit the lake then are fly fishermen who cast their offerings of fur and feather along the shore.

Ask folks in "Raystown Country" when is the best time to fish the lake and chances are they'll begin talking fast about the fabulous panfish fishing in the spring. They'll continue by saying that twelve- to fourteen-inch large and smallmouth bass are fairly common. After that, however, reports of fish catches are less exciting. Specific fish are referred to such as the thirty-inch tiger muskellunge seen at the Snyder's Run boat ramp; but not many tigers are caught consistently. Same with striped bass; some are caught, but their whereabouts much of the time

remains unsolved.

Between 1973-1975, approximately 92,000 striped bass between one and six inches were stocked in Raystown Lake. How well the species will become established remains to be seen. Jim said that, hopefully, the stripers will swim up the Raystown Branch to spawn. Their eggs, which must remain suspended in water — rather than settle on the bottom if they are to hatch, could drift along in the branch and hatch.

While the Fish Commission studies how to manage the lake as a fishery, the U.S. Army Corps of Engineers takes full responsibility for supervising, operating and managing the park recreational facilities. In November, when I toured the lake, the lake was drawn down, enabling workmen to construct additional boat ramps as well as the Seven Points Recreation Area, destined to become a center of attraction. Seven Points and a beach and boat ramp at the Rothrock Recreation Area were scheduled to open during summer of 1976.

Three boat ramps with parking, comfort stations, courtesy dock and launching ramp were open at Shy

The scene to the left is the Snyder Run boat ramp, typical of most areas at such an early hour—almost vacant. Later in the day, the parking lot is filled, right. Dock facilitates the loading of gear; boats may be moored until car and trailer are parked.



Beaver, James Creek and Snyder's Run when boaters visited the lake last summer. Two boat-to-shore campgrounds were also available. Boating and canoeing opportunities are practically unlimited.

While anglers wait expectantly for Raystown Lake to attain full potential as a fishery, they need't wait at all to partake of the blue ribbon angling available now in the tailrace below the dam and in the Raystown Branch down to its confluence with the Juniata.

This five-mile stretch, once a victim of low water conditions — especially in summer, enjoys more water than ever before as a result of a controlled outflow from Raystown Lake.

Deputy Waterways Patrolman Bob Hoenstine fishes below the lake more often than in the lake itself. His favorite spot is Point Access, where the branch joins the Juniata. It was there that he caught a 39-inch musky in the evening shortly after I quit fishing.

"There's a musky in here that we

call 'Dirty Harry' that must go 50 inches and 30 pounds," he said. "Ralph Myers of Huntingdon has hooked him a couple of times and lost him.

"I know there are good muskies in Raystown Lake," Bob continued, "But it's harder to find them in all that water. Here in the branch I know right where they are."

He said the water below the dam is also good smallmouth and walleye country. Some nice brown trout (believed to have come out of the lake) have also been caught. The best musky and walleye fishing is between October and March, with walleye hitting best just before dark.

The next morning, as gunfire echoed from surrounding ridges, I launched the canoe at the Snyder's Run ramp and paddled along the lee side of the bay toward what I'd been told was a good fishing spot near the buoys. Wind held my progress to a snail's pace, and I watched enviously as larger boats with outboard motors passed me. I observed that no one stopped to fish at the spot to which I

was headed.

And I soon learned why. Despite my best efforts with a yellow jig, I got nary a hit! If the spot was filled with fish, they weren't sociable. I decided to paddle into a nearby cove where the wind was weaker and the water calm.

I dropped anchor within casting distance of the shore and began flicking the jig toward some bushes, the tops of which extended above the water. I turned to watch another large boat motoring out of the Snyder's Run cove when I felt something bump the lure. I pulled but missed.

The next cast to the same spot produced another light bump. This time I was ready. The jig hooked into the jaw of a largemouth bass. It was my first Raystown Lake fish, and I released it to help produce what many fishermen feel has already begun to be an outstanding new Pennsylvania fishery.

I hope to return to Raystown again . . . when both the weather and the fish are more sociable!

'Twas a rock he sought . . . and a rock he caught! Author Hossler with one of Raystown's first reported.



RAYSTOWN . . .

"Rocks" for the taking

by Sam Hossler

Over the past few years, new lakes have been appearing all over Pennsylvania and the availability of fishable water has been increasing by leaps and bounds. One of the newest "old" lakes is located in the mountains of Central Pennsylvania, stretching a blue ribbon of beauty along the southwestern half of Huntingdon County. I say new "old" lake because the present impoundment has only been open to fishing for a few years now, but there was an old dam, which went under water when the gates on the new dam were

closed. The Raystown Branch, of the Juniata River, and the old dam and lake on this beautiful mountain stream, was known far and wide for the superb smallmouth, walleye and musky fishing it offered.

When the decision was made to create a new dam much larger than the old one, there was considerable concern among those fishermen that haunted the shores and rocky points of the old Raystown. Let all these fears be put to rest.

The new lake is a masterpiece of recreational pleasure. Although planned first as a flood control project, the U.S. Corps of Army Engineers also built recreation into the overall concept. 1975 was the first year powerboats were permitted

to travel this 30 miles of sparkling mountain lake water, which gives the fisherman 110 miles of shoreline to work over in search of the mighty bass. And, judging by what has been taken and lost, it is a safe bet that the Pennsylvania State record largemouth, and maybe smallmouth, as well, will be taken from these waters.

Raystown Lake is the largest body of water wholly within the boundaries of Pennsylvania and a more scenic area cannot be found anywhere. Steep mountains run down to meet the chilling blue water and in the fall of the year when the vivid colors splash through the trees, it is breathtaking! The northern end, near the dam, is quite deep, dropping to a maximum of 186 feet. The shoreline in this part of the lake has yielded some lunker bass for our part of the country. Two and three pounders are not uncommon on a stringer and five

pounders have been taken with surprising regularity.

Although the new lake had a native population of fish, supplementary stocking was needed to help fill the great void created with this vast amount of new water. Besides the stocking of bass, walleye, muskellunge and northern pike, an experiment was tried and 20,875 striped bass were planted in 1973. These stripers, or "rock fish" as they are known in the salt water fishing circles, were from 1 to 6 inches in length. In 1974, another 29,120 were stocked and in 1975, another 42,000 were planted. Then, in 1974, reports started coming in that "rocks" in the 15-inch class were being taken occasionally and schools of these stripers could be seen tearing up the surface from time to time. It appeared the 1973 stocking had taken hold.

I had visited Raystown Lake a number of times on one-day excursions and enjoyed myself more everytime I made the trip. What I

wanted now, was to spend a couple of days really working over the lake. We had taken a three-pound largemouth during one of our one-dayers and I was sure his brother and sister were just waiting for me.

At this writing, there are two camping areas on the lake accessible by boat only: Nancy's Camp, which is about at the midway point on the lake and Putts Camp which is located toward the southern end of the impoundment. (Editor's note: a third is scheduled for 1976.) A fishing/camping weekend was in order. We would trail the boat to the Shy Beaver access area, then head upstream to Putt's Camp. These are called primitive camp sites since they have no electrical hookups, paved roads, etc.; but, to me they were really deluxe accommodations. Each site had a picnic table and garbage can, plus a fire ring. Water was only fifty yards away and a few swift pumps filled a bucket with sweet well water in no time at all. The comfort station was only fifty or seventy-five yards

away and as clean as you will find anywhere outside of your own home.

My son, Scott, and I had been planning this trip all summer, but every weekend there seemed to be more pressing business and the weeks slipped away into months and the next thing I knew, it was the end of August. One evening, a couple of fishing buddies and I were talking and the subject of a weekend camping trip came up. Naturally, I pushed Raystown. It didn't take much convincing and the date was set for the second weekend in September.

Heading into the mountains anytime after Labor Day can be risky at best, but we were going no matter what the weather. The beginning of the week arrived and with it, cold, blustery wind and rain. Tuesday and Wednesday were more of the same, but on Thursday, it only rained a little in the morning. The cold, raw wind hung on like a persistent leech, however.

Friday came and the phone started ringing. "Are you still going?"

Putt's Camp, one of three boat-to-shore camps; as near to a wilderness setting as you'll find anywhere!



they're calling for frost in the mountains and it may still be raining." I looked out the window to the east and assured everyone the sky was blue and the sun would be shining by the time we got there. This was more a wish than a prediction and I kept my fingers crossed as I continued with my packing.

The station wagon looked like we were going on a safari for two months when we finally pulled out. The trip to Huntingdon was uneventful and once there, we turned off Route 22 and headed south on Route 26, looking for Shy Beaver. Up until this trip, I had fished the northern end of the lake only and was not sure just how far it was to the launch site. In about half an hour, we came to the turnoff for the access area and before we knew it, we were there.

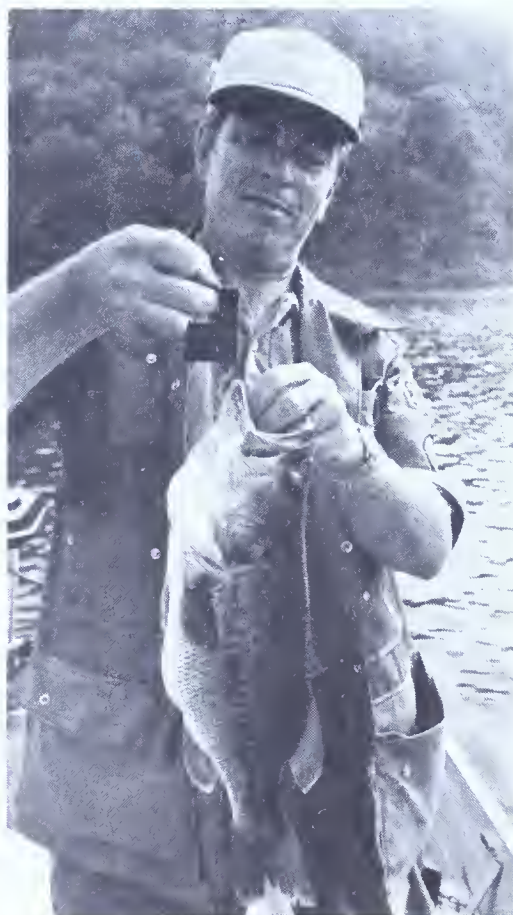
What a surprise! A beautiful launching ramp with parking spaces galore. I had no sooner swung the car around to start backing the boat down the ramp when the thought hit me, *"Dummy, you didn't bring the tent poles!"* Sure, I had a check list but it said tent . . . nothing about poles! Our tent uses external aluminum poles and when I told poor Scott about my oversight, he didn't know what to say. Well, we were there and I wasn't about to drive back home, so we loaded the boat and headed out. It was just getting dusk and the ride back along the lake was beautiful. There wasn't a building to be seen and you could swear you were in the wilds of Canada. An osprey circled overhead, looking for his dinner, as we cruised along the four miles back to the campgrounds. Along the way, we decided the best way to put the tent up was to take the anchor ropes and tie the tent corners to trees . . . if there would be trees to tie them to!

When the campgrounds came into view, there was another pleasant surprise. Groves of trees lined the area and it appeared there would be no problem setting up camp. The temperature had dropped considerably and Scott and I set about getting the boat unloaded and the tent up. By the time we had finished, it was dark and we were mighty hungry, but our two fishing partners hadn't shown up yet.

Surely, they wouldn't try to come back in now. We made dinner and just as we finished a lone outboard could be heard droning its way along the lake. Sure enough, here came our overdue buddies.

Morning dawned overcast with light gusts of wind, but no rain. Expecting cold weather, we dressed for it and after breakfast started out working the lake northward. It took us almost until noon to reach the access area and we had only picked up four bass — none of them were anything to write home about — the big ones just weren't hitting.

Skipping a lot of the unproductive water on the way back, we arrived at camp in time for a quick lunch, after which we filleted the fish we had kept for our fish fry that night. Then, it was back on the water for another go at them. This time we headed south, trolling as we looked over the scenery.



Author Sam Hossler weighs a hefty Raystown largemouth.

Heading into a little bay, the depth locator was reading a 15 foot bottom. Suddenly, a blip showed up at the 10 foot level. Kiddingly I said to Scott, *"There's a school of them, get ready."* As if on cue, my rod bent and started thumping, the line sizzled through the water at breakneck speed and whatever was on the other end, was giving me all the battle I could handle. My first thought was that it must be a monster walleye, but it was fighting too hard for a walleye. Then, I finally had it up to the surface and it rolled and made one last dive. *"It's a striper, Scott, get the net!"*

I remember yelling as this rock fish poured on all the strain I thought I dared put on my eight-pound-test mono. Finally, he tired and Scott slipped the net under him. What a thrill, my first Raystown Rock! He weighed in at just a shade over two pounds and was 17 inches long. No monster, to be sure, but just think what a fight they'll put up next year!

We found the school again on the scope and worked them over all afternoon, but not another rock was to be had. We did pick up some more largemouth bass, however, so our evening fish fry was assured.

The northernmost access area is Snyders Run Boat Launch, which is easily accessible from Route 22 near Huntingdon. Heading south on Route 26 from the town of Huntingdon, you come to James Creek Boat Launch and still further south, is Shy Beaver Boat Launch. If you come in from the south, through the town of Saxton, you can put in at Weaver Falls Access Area. All these facilities have excellent ramps and parking spaces. Sometime in 1976, it is hoped the new marina, launch site and drive-in camping area will be complete. This will be just about midway along the length of the lake and will be quite a complex, when it is finished.

If camping isn't your bag, there are motels around the city of Huntingdon, who would be glad to put you up. And, if you don't like trolling, plastic worms have been taking many bass by anglers working the points and "stickups." Personally, I'm heading back for those stripers, those "Raystown Rocks," I've never had a fight like that before!

NEED MORE INFORMATION?

Write:

**Park Manager
Raystown Lake,
RD 1, Hesston, Pa. 16647**

*Camp counselor displays
a black rat snake to the curious
at Pocono Environmental
Education Center, Dingmans Ferry.*



Taking A Closer Look

continued from page 7

abundance throughout the warmer months.

Just the opposite in personality is the NORTHERN WATER SNAKE which usually refuses to eat while confined and seldom becomes tame. The small RED-BELLIED and RINGNECK snakes are also poor eaters in captivity and the NORTHERN BLACK RACER is too active and nervous to keep for any length of time.

WHAT KIND OF TURTLE MAKES THE BEST PET?

As with snakes, the best turtles to keep as pets are those that are not dangerous and require foods that are readily available. This certainly eliminates the COMMON SNAPPING TURTLE which can break a child's finger or bite off a chunk of flesh. Baby snappers, however, make good *temporary* pets and accept worms, minnows, and bits of lean meat. The EASTERN SPINY SOFT-SHELL can also inflict a painful bite and is best left in the wild.

Some turtles require water in their cages for they are semi-aquatic in nature and a few must actually feed while submerged. Others, such as the EASTERN BOX TURTLE, need only a crude box in which to feed and rest. Dead leaves for a carpet and a small log or a few rocks for furniture will satisfy any BOX TURTLE. A dish of water that is deep enough to get into should also be provided on occasion.

Earthworms, pieces of chicken, apples, grapes, vegetables, lean beef, and even an occasional raw mushroom will keep this popular pet in the best of health.

The WOOD TURTLE, although semi-aquatic in nature, will readily accept conditions and foods similar to that of the BOX TURTLE. Although it may require a bit more room and a larger dish of water due to its bigger size, it makes an ideal pet, lives a long time, and becomes very tame.

Aquatic turtles that make good pets include the EASTERN PAINTED TURTLE, SPOTTED TURTLE, and the MUSK TURTLE or "stinkpot". The latter shelled reptile often gives off a bad smell when first captured but soon becomes tame and gives up its annoying defense. The stinkpot needs enough water to swim around in and is best kept in a partially filled aquarium with a floating log on which it can surface and gulp air. Feed it worms, meat, and fish plus a salad of water plants such as *anacharis* or *cabomba* from a nearby pond or tropical fish store.

PAINTED and SPOTTED turtles also need water in which to swim. Somewhere in the aquarium there should also be a protruding rock so that they can crawl out and sun themselves. This "sun" may be provided by a 40- or 60-watt light bulb suspended above the container. If possible, locate the aquarium so that it receives some natural sunlight each day. Chopped liver, earthworms, fish and crushed land or water snails will help keep these interesting critters healthy.

Although lizards are not as common as snakes and turtles in Pennsyl-

vania, occasionally a NORTHERN FENCE LIZARD or FIVE-LINED SKINK is caught. These reptiles are best confined in a covered terrarium with some moss, rocks, and a small log or stick on which to climb and sun themselves. Their diets include earthworms, crickets, grasshoppers, and mealworms.

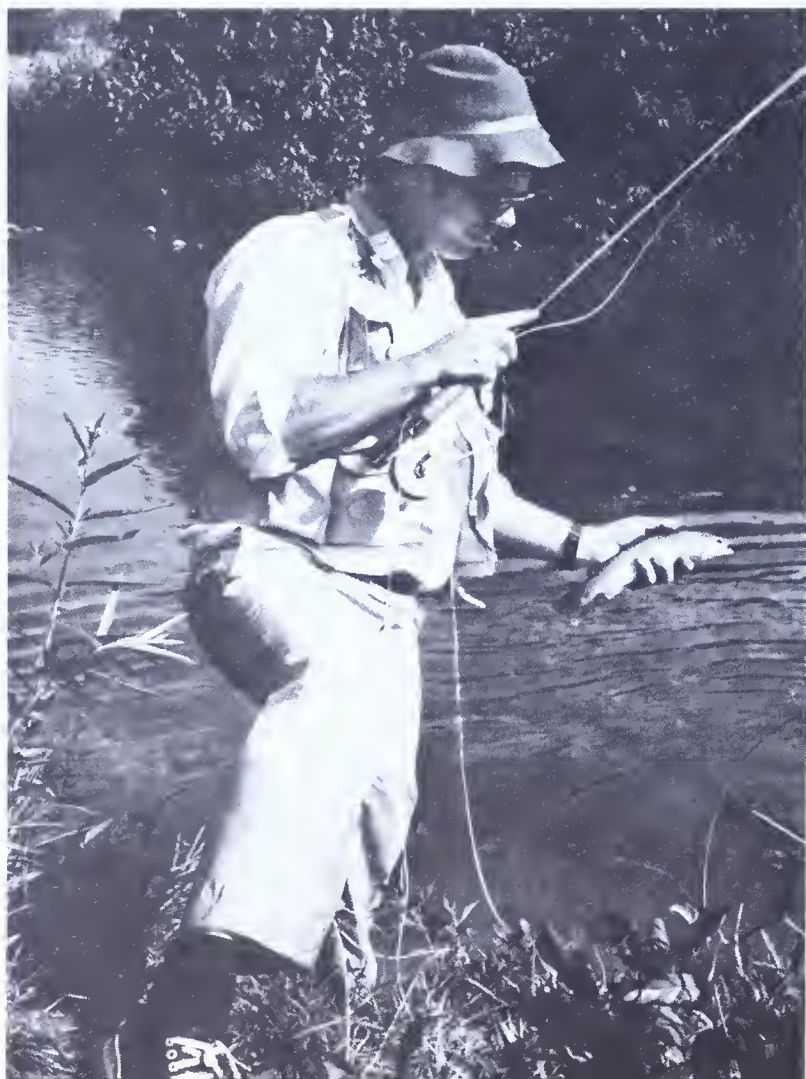
Be sure to keep the homes of *all* reptile pets clean. A fouled cage can result in sickness or even death for the captive animal. In recent years scientists have discovered that some turtles carry a disease known as *salmonellosis* which humans can contract. If your child's pet is kept clean and healthy, there is no danger of the animal getting such a disease.

The very best advice for keeping any reptile as a pet is to make it a *temporary* one only. Children often lose interest once a novelty wears thin and the possession of pets is no exception. By taking the animal back to the place where it was captured before the hibernation season is at hand, you will not only be ensuring the reptile's safety but teaching your son or daughter an important conservation lesson as well.

As a teacher I firmly believe that the possession of certain wild pets is an important part of the outdoor learning experiences of all children. It creates an awareness along with training in responsibility and compassion. If a youngster's interests can be strengthened by the possession of a "temporary pet," the experience should not be discouraged by a parent or teacher. Properly cared for, many of Pennsylvania's interesting reptiles fare no worse.



Angler above watches drift of fly on Antietam Creek pool. Below: the author examines a nice brown before release.



Antietam Creek

A new FISH-FOR-FUN gem

by Gerald A. Almy

PENNSYLVANIA ANGLER

Like most anglers, I often find myself torn between the urge to fish the old familiar waters where I know what to expect and the desire to explore new terrain. Of course the fishing may be more difficult to start with on an unknown stream; but, in the long run, a fine new fishing hole may be discovered if time is taken to learn its secrets.

Thus it was one day last August that I settled on the expedient of fishing my old faithful Falling Springs Run for the bulk of the day, while saving a couple of hours in the evening for the newly established FISH-FOR-FUN stretch on the East Branch of Antietam Creek near Waynesboro, in Franklin County.

Falling Springs met my expectations: challenging, beautiful, *and crowded!* It was Sunday, and the Caenis hatch was coming off heavily, bringing out every "fly flicker" within a hundred miles. By 4:00 p.m. only eight fish had come my way and I was eager to make a beeline for the new stream.

Imagine my surprise when I walked down from the Renfrew Museum parking lot off Route 16 and for the first 200 yards of trophy water saw not a single angler! At first I was delighted, but then the skepticism crept in "... maybe there's no one here because there are no trout?"

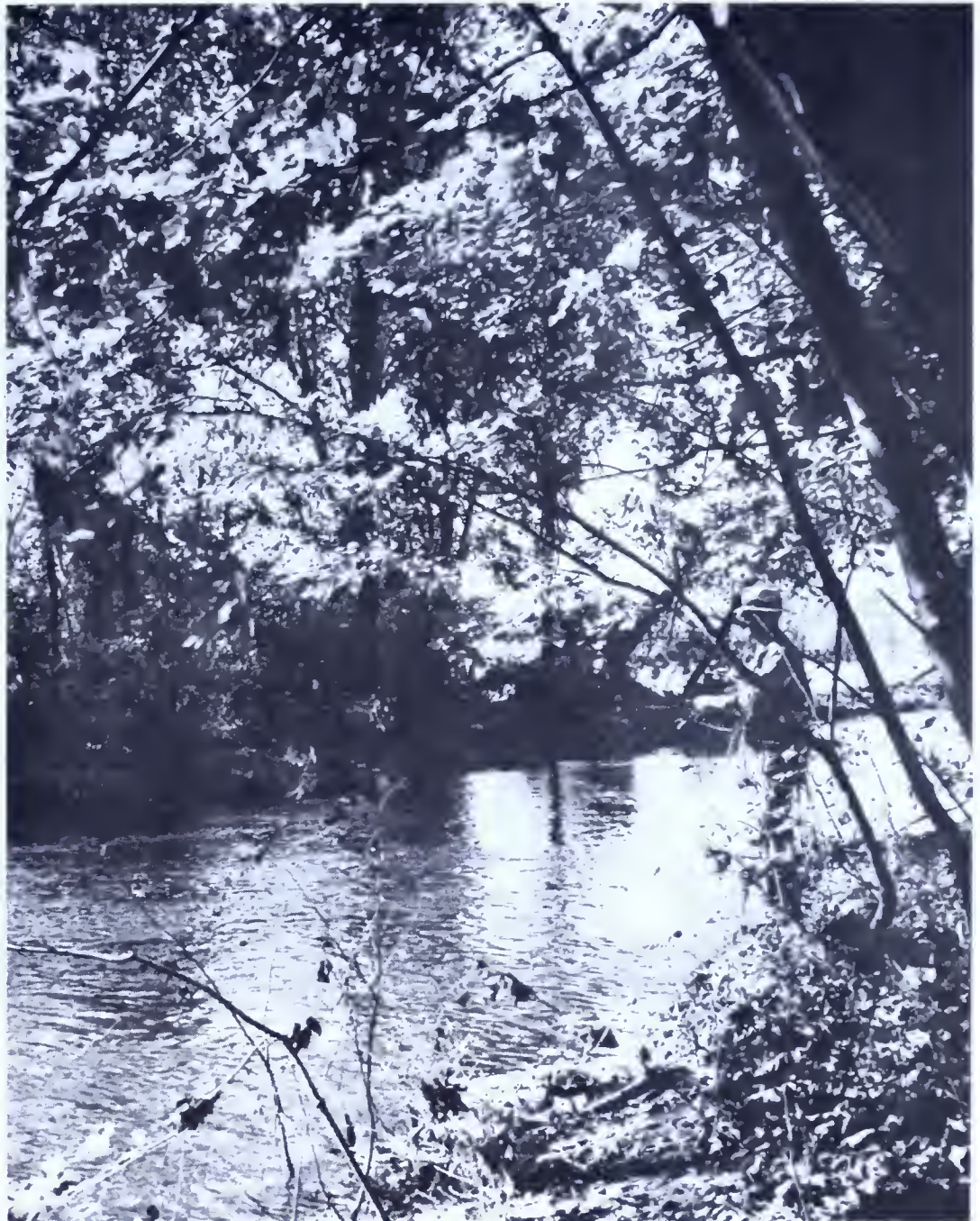
The first pool I stopped at dispelled any doubts in this regard. It was a long, serene stretch of water shaded by a canopy of maples and sycamores. Only a few rare streaks of sunlight penetrated the dense tunnel of leaves. The shade offered a welcome relief after hours in the blistering sun.

I approached the shallow tailwater cautiously, but seemed to spook four or five foot-long trout which were milling about there, nevertheless. They swam around excitedly, and I thought they'd be impossible to fool. But after a few minutes they settled down again.

No insects were hatching, so I cast a #14 black beetle to the largest fish, driving it with a splat to the surface. The strike came hard and fast. I pulled back and felt solid resistance as a fine brown tore line from the reel with a whining hiss as he dashed to the head of the pool. His antics met no obliging hand from me, however, and soon I slid the hook free of the husky 14-inch.

Four more trout tore into the fly on

Not much room for a backcast on this stretch of beautiful Antietam Creek.



subsequent casts. When the beetle was chewed beyond recognition, I tied on a black ant and received equally frantic rises.

I thought I was going to explore this stream in two hours? An hour and fifty minutes after arriving I was still on the first pool! There was little cause to move, other than edging slowly up the pool, for no less than 14 trout had fallen victim to the terrestrials in that time.

By now I was up to the rapids feeding the pool. Deciding I'd better call it quits after one more fish, I attached a #10 black cricket to the leader and cast to the swiftest part where the frothy chute fed the deeper water. The fly floated about two feet when a feisty set of choppers arose from the rapids

and clamped down solidly on the black fraud. I struck and felt the solid head-shaking of a hefty fish. The brown fought stubbornly against the light bamboo rod, streaking in 50-foot runs to the tail of the pool, slowly being pumped back up, and then repeating the maneuver. Finally I slid my fist around the big-spotted brownie and twisted my cricket free of his cavernous jaws. A quick photo and back he went, all 18 inches of him, seemingly as frisky as ever after his 10-minute battle.

With results such as this, you can bet I was back on the stream often in the following weeks. Though action hasn't always been as frenzied as it was that Sunday afternoon, the fishing has been of a consistently good

A handsome 16-inch brown trout released to provide another angler sport.



quality. Surprisingly, in some half-a-dozen subsequent trips to the stream, I've seen a total of four fishermen on the water! Three times on weekends there were no anglers present at all.

Part of the reason for this scarcity of fishermen may be the fact that the FISH-FOR-FUN stretch was only established in February of 1975. Many anglers are no doubt waiting for word to filter through the grapevine as to whether the stream is a hot one.

No need to wait any longer. Antietam Creek is a winner. Actually, only high quality streams are chosen by the Pennsylvania Fish Commission for inclusion in the FISH-FOR-FUN program anyway. The stream must be able to support trout on a year-round basis to make sense in opening the season all year.

Upon request by the Renfrew Museum and Park Board of the Borough of Waynesboro, Antietam was investigated by the Fish Commission to see if it was suitable for such special regulations. In July, 1974,

the site was approved by the Pennsylvania Fish Commission on the recommendation of fisheries management researchers.

Although no natural reproduction was noted in the FISH-FOR-FUN stretch of Antietam, Robert B. Hesser, Chief of the Fisheries Management Section of the Fish Commission stressed, "This does not mean that some limited reproduction does not occur. We would expect possible limited recruitment from small cold tributaries and springs in the area."

The stream receives ample plantings of hatchery fish to supplement this small native population. Five times during the season Antietam receives an allotment of between 280-500 brown trout. Altogether, some 1,690 fish ranging from 8- to 18-inches long are stocked throughout the year.

This may seem like a lot of fish for .75 miles of water, especially when only one fish per day over 20-inches may be creeled, but Commission

biologists feel there is a sufficient food supply in the stream to support this population at a healthy level. If the fish I catch are any indication, they're certainly right. Most of the trout are full-bodied, well-formed fish. I've taken a couple of 16-inchers that were downright fat.

One of the requirements for recommendation for FISH-FOR-FUN status is that a stream have an abundance of food. Antietam Creek meets this stipulation easily. Pods of minnows can be seen swimming about in shallow areas, and Mr. Hesser noted that many species of aquatic insects were uncovered during their research on the stream. Some of the prominent mayflies included, according to Hesser, "species of *Stenonema*, *Ephemerella*, and *Baetis*. Stone flies were primarily species of *Acroneuria*, and the predominate caddis was *Hydropsyche*. Freshwater shrimp, *Gammarus*, midges, and fish flies were also noted."

Quite an impressive list! Add to

these the terrestrials which are extremely important here during summer and early fall months, and you have a good indication of what flies might prove productive on this handsome little freestone creek. Big bushy streamers shouldn't be overlooked either, particularly if you're looking for a "keeper." Local angler Mark Selman reports already catching several fish over the 20-inch limit on Muddler Minnows since the FISH-FOR-FUN area was established.

Mark caught these fish "down in the woods," which is an apt description for the lower stretch of the stream. This section harbors some fine deep pools, but requires a little "brush-busting" to reach. The upper half is more open, providing better dry fly water with more room for back-casts.

You should be prepared to encounter a few modest hazards on

Antietam. Poison Ivy is one. It grows rampant in a few areas along the creek, so watch where you place your hands. The other two are animate critters: mosquitos and bees! The mosquitos aren't too much of a problem. Simply apply a good insect repellent if you plan to be on the water the last few hours before dark.

Bees are another thing entirely. I received a rude announcement of their presence on my second trip to the creek. Jaunting merrily downstream through the forest on the western shore, suddenly a strange buzzing filled my ears. Too late! Already the sharp jabbing pain sent its message through my face and hands. Two yellow jackets had struck home with their venom-filled barbs. To compound matters, while fleeing I lost my rod trying to swat the pests from my face. Luckily, after recouping, I managed to sneak back when they'd

calmed down and retrieve the fly outfit.

Suffice to say, go slowly and carefully through the woods! But by all means don't let these minor irritants dissuade you from trying this fine trout stream.

To reach the FISH-FOR-FUN stretch of Antietam Creek, take Route 16 east at the Greencastle exit off of I-81 to the town of Waynesboro. Just beyond the town, Route 16 crosses the stream. Immediately past the creek a right turn on "North Welty Road" will take you to a parking area under construction for fishermen and museum visitors.

This will put you at the upper end of the trophy water. From here downstream, for .75 miles, only artificial flies are permitted; and, there is a limit of one fish per day over 20-inches. But there's no limit on fun, because there's no limit on the catching!

Poster on tree spells out regulations for Antietam's Fish-For-Fun stretch.





Life on the Old Canal

by Ted Fenstermacher

The author, Ted Fenstermacher, spent 42 years of his life with the Berwick Enterprise . . . the last 28 as its editor. The Susquehanna Division of the Pennsylvania Canal played an important part in Berwick's early history, as it did in other riverside communities. Remnants of it still exist: the canal bed itself, the towpaths, a lock here and there; and, in Beach Haven, the site of the old "weigh lock," portions of the walls of the stone lock still remain. Ted still free-lances for a number of newspapers and magazines. We're grateful to him for bringing to us this historical account.

Darkness was falling. The clomp of the mules' hooves on the towpath of the old Pennsylvania Canal mingled with the swish of water under the bows of the two canal boats and occasional deep "baa-roomphs" of bullfrogs.

The nine-year-old son of the canal boat captain walked near the mules, occasionally prodding them with a stick to hurry them along.

His father watched from the deck, puffing slowly on his pipe. At the rear of the second boat another man (employed at about \$10 per month) held the tiller of a big rudder. He kept the boats, bound together, from hitting the bank.

A cheerful yellow light came from the small windows and the open trapdoor of the cabin on the lead boat.

The galley, lighted with an oil lamp, was in that cabin. The cabin's top extended only about 18 inches above the deck.

Aroma from a 12-inch heavy iron skillet filled with frying panfish combined with the fragrance of freshly baked loaves of bread.

The captain's wife was the cook — a common practice after the canals had passed their earlier day era of violence. A barrel of flour (it cost \$3.50), a bag of salt, a can of lard, a stone crock of eggs and salted shad were among items on the shelves.

A freight boat can be seen approaching the Berwick lock, with its cut stone sidewalls. The covered bridge seen in the distance led across the canal to the old covered toll bridge that ran between Berwick and Nescopeck in the late 1800's. Locks were used to raise and lower the boats to different levels to accommodate varying elevation in the surrounding terrain.



The woman at the small coal stove had caught the panfish herself. She had caught some catfish too. They would be used for breakfast.

It sounds like it would have been a great life, doesn't it? It sounded great to me too, when I was a child and heard, *firsthand*, tales of life on the canal. Because the foregoing is *not* from my imagination. It is as described to me many times by my Grandmother, Elizabeth McQuown. She was the "Captain's wife" because my Grandfather William McQuown and she operated two canal boats for many years on the Pennsylvania Canal.

Grandfather McQuown died when I was only five, but Grandmother McQuown, a wonderful lady, lived with us until her death when I was in high school. My friends and I used to love to hear her tell of the canal days.

Practically every boat carried a fishline and some hooks. Fish were usually there for the taking whenever the boat stopped. Bigger fish were found at the many so-called "wide waters." Those were at places where there were wharves, or boatyards or a weigh-lock. There were also bigger fish in the rivers that paralleled the canals.

There wasn't much time for fishing in the rivers unless there was a bad delay at a lock, as other boats went through first, or — Heaven forbid — a washout of the bank!

In earlier days of the canal travel was even permitted at night — which was rough on the lock tenders' sleep. Then the rules were changed and travel was from dawn to nightfall; or, rather, to the next lock after nightfall.

When the boats were stopped for the night the mules were unhitched from the tow rope and were tethered for the night.

The cabin had sleeping quarters but, if the weather was fair and warm, canallers often preferred to sleep on deck.

Such was life on the old canal—at least in the latter part of the last century.

In earlier years canal conditions had been much more rough. Ground had been broken, at Harrisburg, in 1826 for the canal and most people were enthusiastic about this "great advance for our commerce." For the first few decades many were not nearly as enthusiastic as before.

Those early canallers were a rough, tough lot and most law-abiding citizens had no desire to mingle, in any

way, with them. The canal men, it was said, would rather fight than eat. That was "eat" — not "drink."

Money wasn't plentiful but drink was cheap. Your canaller would have snorted "sissy," had he seen anyone order a present-day shot of whiskey. The standard shot then was a half-pint. That's right. A HALF-PINT! But it only cost a fip and a fip was six and one quarter cents. If a fellow couldn't afford that he could get a good-sized glass of a dynamite-like concoction made up of rum and molasses for three or four cents.

The courage that came in jugs had a nasty habit of resulting in horrible brawls. If girls were present, say historians, they were "ladies of easy virtue."

Those "ladies" were often the cause of scraps. There were occasions, it has been said, in which those "ladies" were not averse to beating out a lively tattoo, on the heads of men who displeased them, with a poker, or a club or perhaps just a handy piece of iron. Just good clean fun!

Early canalmen had a habit of "finding" a lot of things before anyone had "lost" them! Like fence rails for firewood, chickens, corn, apples or almost anything else that struck their

fancy. Farmers along the canal actually figured on losing the first three rows of sweet corn nearest the waterway.

But after a few decades of such shenanigans, the canallers took a turn for the better. Historians such as the late Dr. Lewis E. Theiss, a Bucknell University professor, said the big change developed when wives began to accompany their husbands on the boats.

While that might have cut down considerably on the extra-curricular activities of the men, they had to admit it had its good points. Good food and the substitution without pay of one of their own children for the mule-prodder duties had to be considered.

While behavior was rough on all canals in the earlier years none equalled the Schuylkill Canal in that respect.

Dr. Theiss, who researched the matter thoroughly, described a big group of hoodlums there as "pirates" and he compared the canal to the Spanish Main.

That bunch called themselves the Schuylkill Rangers. They weren't really organized but they formed a lot

of wolf-type packs that preyed on canal shipping. There were usually five to eight men in a pack. They never attacked unless they outnumbered the prospective victims at least two to one.

The Rangers would drop onto boats as they went under bridges over the canal or would pull alongside in large rowboats or rafts and swarm over the side in true pirate fashion. They would rob, which was bad enough, but they would usually also beat or even kill their victims. Hardly the type person you would care to see come to dinner.

The pirates conducted such a reign of terror for several years that the captains and their crewman often jumped overboard at once. They would return after the Rangers left. Not exactly heroic, but very good judgment under the circumstances.

There were, thank Heaven, some exceptions. The Rangers should have known better than to attack the boat of one Capt. Peter Berger. He had named his boat the Rattlesnake and had declared many times that any Rangers who boarded his craft would depart feet first. He couldn't have called the shot more accurately.

One dark night, while the Rattlesnake was tied up to a Philadelphia

wharf of the Schuylkill Canal, a group of Rangers showed hopelessly bad judgment.

They decided to show that Captain Peter Berger was not the man he thought he was. Alas and alack for them, Pete was not only on the deck of his boat but he was ready and willing to do battle.

He also was able! The Colt he always carried blasted twice and two of the pirates immediately departed this earthly life. The others fled with whining lead for company.

The mayor of Philadelphia read of Pete's prowess with the Colt and decided he should also have another weapon. It was an engraved Colt, a real beauty, and it was presented in a civic ceremony. After that the stalwart captain wore two guns. One old canalman later said, "Capt. Berger was the original Two-Gun-Pete."

Among other no-nonsense boat owners was Captain Henry Boyer, of Reading. Following a signal by his mule-driver that Rangers were launching a stealthy attack, Henry greeted them as they started over the side. He was swinging a razor-sharp axe and the results were impressive. Blood was pouring from many pirate wounds as

This rare old photo shows a long line of freight boats on the old canal, apparently tied up for unloading or loading. The worn area along the left bank is the towpath where mules and horses, which drew the canal boats, walked. The Susquehanna River, which provided water for part of the canal system, can be seen at left.



Sporting their Sunday best, passengers await a packet, or passenger canal boat, at the Beach Haven weigh lock. Packet boats would pass through in the foreground, but freight boats would have to stop under the archway on the opposite side of the platform to be weighed on giant scales to determine their fare for passing through.



they hastily retreated to their attack craft and disappeared in the night.

Unfortunately, most cases of pirate attack were not like the above. In fact they became so successful that they, to borrow a cliché, began suffering from illusions of grandeur. They decided to capture towns and get much greater hauls than could be secured from canal boats.

More than a dozen decided on Schuylkill Haven for a start. The citizens, in some manner, heard of the plan and they took their guns and were waiting for the would-be raiders. The citizens killed one pirate, wounded others and carted those they could catch off to the local bastille.

The Rangers must have decided to do things in a bigger way: capture Pottsville! More than 200 of them tried it. But Pottsville had also learned of what was planned and the "militia" was called to arms. The Sheriff called out a posse of citizens. Fortunately, guns in the hands of citizen were then an unquestioned right and everyone seemed to have such weapons. The Rangers learned that quickly. One view of the "militia" and other citizens lined up, and the order was "Retreat!" After that, comparatively little was

heard of the Rangers.

The canals provided a way of life for many people but the Pennsylvania Canal system, some 800 miles of waterways, never was a financial success. The original cost and the maintenance costs were just too great. The state consistently lost money on its giant investment.

The railroads were developing rapidly and they sliced off the lion's share of freight business. They could haul the year-round and at a lot better speed than four miles per hour.

By the end of the century it was all over. Many boats were left in the canals to gradually rot away . . . wood from others was salvaged.

Railroads bought many of the rights-of-way, something that really rankled the boatmen but which was practical. There were many canals filled in to provide a new roadbed for trains. That was a big job for most canals were 28-feet-wide at the bottom and 40 at the top. They held at least five feet of water.

Travelers sorrowed over the end of the canals even more than shippers who liked the low freight costs. Passenger craft, known as packets, were usually attractive and well-kept

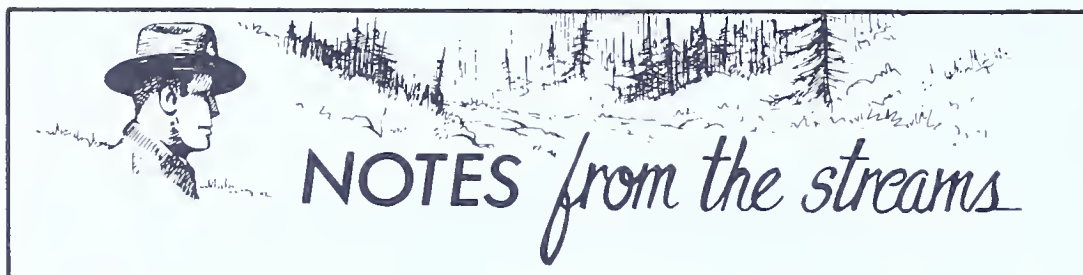
craft. There was food and fellowship and in fair weather passengers often rode on top of the long cabins as the boats, drawn by horses, *sped* along at five miles per.

And the food. Wow! The same menu was served three times a day. It included: bread, butter, salmon, shad, liver, steaks, ham, chops, sausages, potatoes, pickles, black pudding and coffee or tea. Cholesterol worries were not in vogue then.

The Pennsylvania Canal System, which even included a portage that hauled canalboats on tracks over the Alleghenies on the Philadelphia-Pittsburgh run, was a great one.

Certainly it covered a lot of territory. It ran beside (and in some cases even in the stream bed) of such streams as the Schuylkill, Susquehanna, Brandywine, Lehigh, Conococheague, Conestoga, Lackawanna, Octoraro, Delaware, Juniata, Conemaugh, Allegheny, Kishkimenitas and Monongahela.

It's all only a memory now but the Pennsylvania Canal Society, many museums, and even some restored canal sections used as tourist attractions, are helping keep the memory alive.



A DRAW!

Some friends and I were fishing in the Susquehanna River when one of them, Bobby Stufflet, began a lengthy battle with something quite large. It would pull on his line with great force and for some time he could not budge whatever it was that had taken his bait. Soon a crowd of about a half-dozen helpful fishermen gathered around Bobby, offering advice so that he would not lose his prize. Some advised not to horse it in; others stated that he should put some pressure on, and try to land it.

A few yards upstream, mostly unnoticed by the group, was Tom Kamerzel, doing battle himself with what appeared to be a good sized fish. We began noticing that when Tom's fish would run, Bobby would gain some line, and when Tom was able to reel some line in Bobby's fish would make a strong run.

The situation soon became apparent to everyone there, and as the two fishermen battled each other to a standstill and also began to realize what each had on the end of his line, there were red faces all around!

It's embarrassing enough to realize you had been trying to land another fisherman, but it's worse when you find you've been giving advice on how to do it!

*Fred Mussel
Waterways Patrolman
Lehigh County*

THIRD CLASS?

En route to stock the North Fork of Big Sewickley Creek, I stopped to gas up the state car at the PennDOT garage. Some of the fellows were on their lunch break and we were making small talk. I mentioned, "The fish are coming into the Baden Post Office at 12:30 p.m." Hearing this, one man asked, "Are they sending 'em by mail now?"

*Don Parrish
Waterways Patrolman
Beaver County*

MYSTERY SOLVED!

The Marysville Sportsmen's Club sponsors and maintains a cooperative nursery and during the winter months their trout are fed a venison diet. Venison is an excellent trout food but the portions that are not digestible clog the screens used to separate the different species of trout in the raceway. Skip Boyer, Nursery Chairman,

had his hands full keeping the screens clean. However, by utilizing two sets of screens in rotation he was able to keep one set clean for future use. One day, after rotating the screens he didn't have time to clean the dirty set and placed them against a tree. To his amazement they were as clean as a whistle the following day. During the winter this "mystery cleaning" occurred several times and other club members would not own up to having done the chore. Light was finally cast upon the mystery one day when Skip observed winter's little birds furiously eating the trouts' leftovers from the uncleaned screens. Skip was elated with this discovery because the club's hard work in processing the deer was doubly rewarding! And, the mystery was solved.

*H. Benjamin Leamer
Waterways Patrolman
Perry County*

BIG FELLERS!

While launching a Fish Commission patrol craft on Lake Raystown, Huntingdon County, I had the opportunity to talk to some of the fishermen and women and examine their catches. The productivity of this 8300-acre impoundment is fabulous, indeed. The size of the bluegills and crappies is much better than I have ever seen. Example: 23 bluegills — 11 lbs. Creeling a legal limit is no trick at all.

*Richard Owens
Supervisor
Southcentral Region*

"MAGNUM," TOO . . .

BETCHA!

On the evening of March 16th, I was asked by Richard Walton, sportswriter for the *Wilkes-Barre Record*, to meet one of the paper's photographers at Harveys Lake the following day and arrange to get some picture coverage of that day's trout stocking. The photographer got some nice shots of the many people present who were observing the stocking and he then asked me if I would hold up one of the trophy palomino trout which we were stocking so that he could get a shot of it. I did this and at the same time, because it was a nice large fish, I measured it at the request of several bystanders. The fish measured out at a liberal 19 inches.

Today I got a letter in the mail along with a copy of the picture of me and the palomino trout from an unnamed reader. The writer remarked, "Who are you Fish Commission people trying to kid? Even an uneducated person like myself can tell that you are holding a stuffed fish. If you want to fool people with pictures like that, use a fish that is not white with age next time." The letter goes on to say, "Even though I was never well-learned, I have a brother who graduated CUM LOUDER, and he agrees with me."

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

LOSERS WEEPERS —

A friend of mine was returning home from a sportsmen's meeting late one night when he observed two men acting strangely near a parked car at the side of the road. The men were shining flashlights into the weeds and were on their knees. My friend inquired what had happened. The one man replied that his buddy had thrown a beer can from the car window and his wristwatch slipped off his wrist and went along with the can! Seems like the punishment fitted the crime!

*R. A. Bednarchik
Waterways Patrolman
Chester County*

SUSQUEHANNA JAWS —

One fall evening, District Game Protector Ruths and I were gigging carp below the York Haven Dam. As we rounded the lower side of a small island, the light from our lantern must have scared a monstrous musky in the 50-inch range that was lying in wait for some unsuspecting fish. Within seconds the musky attacked our canoe ramming the stern and catching the game protector and me by surprise. The fish made three giant leaps and disappeared into the darkness. The rest of our fishing trip was haunted by the thought of the notorious man-eater: "JAWS."

*Leonard K. Barshinger
Deputy Waterways Patrolman
York County*

SHORTY —

Once in a while a trout less than six inches finds his way into a truckload to be stocked. I noticed such a fish during a stocking of Hereford Manor Lower Lake and joked, "There's a \$10.00 one!" (The fine for keeping a trout less than six inches in length.) An interested bystander hearing my remark asked, "Are some of them tagged?"

*Don Parrish
Waterways Patrolman
Beaver County*

"CLOSE"!

I recently presented a slide lecture program to a pack of Cub Scouts from Dunlo, Pennsylvania, and some of the slides showed various species of fish. Two of the species shown were channel catfish and bullheads. I pointed out some of the distinguishing characteristics of the two for identification purposes.

About eight slides later the channel catfish appeared. I asked for someone to identify it and one youngster gave the correct answer, "Channel Catfish." About four slides later the bullhead appeared; again I asked, "*What is the name of the Catfish?*" One of the adults replied, "**That's the opposite kind of the other kind!**" She was close!

*Robert L. Kish
Waterways Patrolman
Cambria County*

NO WAY!

A young boy called my headquarters one evening to ask for information concerning gigging suckers. After I supplied him with the information he needed, I asked him where he intended to try his luck. He replied, "*I couldn't stand to stick a gig in a fish. My mother's the one that's going gigging!*"

*James T. Valentine
Waterways Patrolman
Huntingdon County*

GOOD IDEA —

Recently my son, Lee, who is in the first grade, came home from school with what seemed to be the "Three R's" of schooling as most of us have thought of: Rod, Reels, and Relaxation. I always tell him to use good books and after his visit to the school library that day he brought home the best of all books for me to help him read. It was the February issue of the *Pennsylvania Angler*.

*L. E. Pete Ellerman
Deputy Waterways Patrolman
Cumberland County*

A REAL "SPORT"!

While patrolling one of our trout stocked streams before the opening day of trout season, I met a "sportsman" who just happened to be in the same area.

He lectured to me on why he disagreed with our trout stocking program. Guessing from his attitude that I was not about to be educated by anything original, I prepared myself for the ordeal of listening to the same old tired stories. I was right. For several minutes the "sportsman" told us that, being a sportsman, he does not enjoy fishing for or keeping stocked trout, that he likes to fish for smart native trout, etc.

In a pool nearby, we could see quite a few hungry looking trout swimming about. This "sportsman" then proceeded to show me how the uninitiated trout in their new environment could easily be fooled into eating stones. While talking, he began throwing handfuls of pebbles into the water near the trout. I advised him against this practice, as the pebbles had no nutritional value that I knew of, and could possibly injure the trout if they swallowed the small stones, mistaking them for food pellets.

This "sportsman" had a few more things to preach on before leaving; and, as a farewell gesture, he began urinating on a tree in view of two houses and two kids on bicycles.

*Fred Mussel
Waterways Patrolman
Lehigh County*

TRIBUTE —

I would like to publicly thank seven dedicated sportsmen who traveled to Hereford Manor Lakes on a cold and rainy Sunday morning in March to pick up litter left by thoughtless persons last season. To Doug O'Shea, Steve Procovich, Jr., and Steve Procovich, Sr., of New Brighton; and, Kim Deer, Colleen Deer, and Jerry Deer, Jr., who came all the way from Northside Pittsburgh with their dad Jerry Deer, Sr., many, many, thanks on behalf of the Pennsylvania Fish Commission. You people stand out in a select group of interested conservationists!

*Don Parrish
Waterways Patrolman
Beaver County*

DON'T BET ON IT, STAN!

On a beautiful day last September, I was en route to Waterways Patrolman Deiger's residence in Greene County to assist him with a muskellunge fingerling stocking in Dunkard Creek. When I arrived, Mr. Deiger informed me that he received a telephone call advising him that the stocking truck would be about one hour late. Not wanting to sit around on a nice day, we decided to patrol Ten Mile Creek on our way to the meeting place with the truck.

After driving about a mile along Ten Mile Creek outside the town of Jefferson, not one fisherman was observed. Being the fisherman that I am, the weather, the stream, and the solitude got the best of me, and I couldn't resist trying about 15 minutes of casting for smallmouth bass. I tied on a little rooster tail spinner with a white feathered treble and picked out a spot which had a gravel bar that fell off into a pool of about two feet of water. On the first cast, I watched the spinner work

across the bar and swing through the current without any success. On the second cast, the lure got to the edge of the bar when a large, dark object came out of nowhere and the spinner disappeared. After about a 20-minute battle, a 26-inch musky was landed and released.

Since that event, each time a fisherman tries to tell me how lousy the fishing is in western Pennsylvania, I smile and think of all the muskies in Ten Mile Creek that will probably die of old age.

*Stanley D. Plevyak
Waterways Patrolman
Washington County*

GENUINE!!!

What would you call two guys who would fish for hours in below-freezing temperatures shortly before the end of the season, each of whom hooked and landed walleyes over 25-inches long; but, seeing they were females, ready to spawn, turned them loose, only to go home empty handed? How about "SPORTSMEN"?

*Robert Lynn Steiner
Area Waterways Patrolman
Northwest Region*

OUT OF "SYNC"!

I was on patrol on Harveys Lake. It was a typical summer day, the temperature hovering around seventy degrees, sailboats on my right and boats towing water skiers on my left. About the only thing that was not typical of a summer day was the date: March 20, 1976! All of you "rebels" from the southern portion of our fair state should realize that at this time of the year we usually have up to a foot of ice on our lakes. Last year, on the opening day of trout season on Luzerne County's Mt. Springs Lake, the only way you could fish was through a hole in the ice. I have been in this area for ten years and I have never seen the ice gone at this time of the year. Normally, we must cut holes in the ice for our spring stocking.

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

NATURALLY!

While stocking Reardon Run this past spring, an interested onlooker asked local sportsman, Bill Raymer, of Ambridge, what kind of fish we were putting in the stream. "Trout," said Bill. "*Both kinds?*" the man asked. Realizing we stocked three kinds: brook, brown and rainbow, Bill was puzzled over the man's question and asked, "*What do you mean both kinds?*" The stranger replied, "*Male and female!*"

*Don Parrish
Waterways Patrolman
Beaver County*



BRUSHING UP ON BASICS

by Alan MacKay
Marine Services Specialist

With Pennsylvania being the focal point for the celebration of the nation's 200th birthday, it is expected that the Keystone State will play host to a tremendous influx of tourists this summer. Estimates of the visitor population this season have ranged as high as 100 million, and it stands to reason that a good percentage of folks touring the state will have the family boat in tow.

KNOW-HOW-COURTESY PREVENTS RAMP CONGESTION

Launching ramp congestion can build up fast. All it takes is one inexperienced or thoughtless person. Follow these simple rules, and you won't be the object of sneers from impatient boatmen waiting in line.

Trailer manufacturers specify load capacities for each model. Stay within these limits, and your rig will be easier to tow, launch and load. Be sure to include the weight of the motor and assorted gear when you're adding up the grand total.

Have your dealer correctly adjust the rollers to fit the contour of the hull. Besides protecting the boat from

distortion, your rig will slide on and off the trailer easier.

Surprisingly, many boatmen struggle and cuss because they don't understand the correct operating procedures of trailer mechanisms. If you have questions, don't hesitate to ask your dealer. In fact, it might pay to have him demonstrate the correct technique several times.

If you've never towed a trailer before, take a few practice runs. You'll notice that it will take longer to stop; acceleration will be slower. Add a couple of inches when turning a corner so the trailer will clear without hitting the curb. An empty parking lot is a good practice field.

There's only one trick to trailering. When you back up, the trailer will go in the opposite direction that you turn. If you turn the wheel to the right, the trailer will swing to the left. Save yourself confusion and embarrassment. Practice this several times before actually trying it on the launching ramp.

Make sure your rig is ready to go when you're on the ramp so that you will not delay others unnecessarily. Assorted boating gear should be transferred into the boat while you're waiting, and make sure the drain plug is installed.

Launching is a two-man job with one person acting as a guide for the driver. Line yourself up at a right angle from the water. Back up slowly

and stop a few feet from the edge. Remove the tie-downs, tilt the outboard motor up and unlock the bow winch. Back up again until the trailer wheels are one or two inches into the water. Set the emergency brake and put the car in gear. Have your guide hold onto a lead line from the bow. This will prevent the boat from drifting into open water when it slides off the trailer.

The loading procedure is just as simple. Line up the trailer and the boat. Connect the launching cable and let the winch do the work of retrailering. Pull out of the water and off to the side before checking all fasteners, plugs, tie-downs, and gear inside of the boat. Spend as little time tying up the ramp or launch area as possible.

It's easy to be an expert. All it takes is a little practice and consideration for others.

TYPICAL TRAILERING PROBLEMS

SYMPTOM: Boat or trailer or both may pitch up and down while towed.

CAUSE: Too much weight in afterend of boat, or wheels set too far forward.

CURE: Move some of the cargo load forward. Move axle assembly to the rear about four inches. Experiment until pitching stops.

SYMPTOM: Trailer "rocks and rolls" side to side.



Opposite Page: A securely fastened lead line would have prevented that boat from drifting away from the launch ramp. Left: A few more seconds of checking the parking brake would have prevented this poor motorist's "dunking"!

CAUSE: Weak or broken trailer spring. Low tire inflation pressure on one side or both sides.

CURE: Replace spring. Inflate both tires on trailer to recommended pressure.

SYMPTOM: Trailer "bottoms" over rough roads, driveways, and ruts.

CAUSE: Too much weight on tongue of trailer. Hitch mounted too low. Low pressure in rear tires of car. Weak car springs.

CURE: Check tires on car for correct inflation. Carry 4 psi to 6 psi over the recommended inflation pressure when towing the boat. If trailer tongue weight is 10% of total weight or less, and trailer still bottoms, creating sag in the rear of the towing vehicle, you can suspect worn springs or shock absorbers on the car. Replace them with heavy-duty springs.

SYMPTOM: Trailer fishtails and sways back and forth at high speeds.

CAUSE: Too much weight in rear of trailer. One tire may be lower than the other. If problem is chronic, trouble may be axle and wheels too far forward. Weak bumper hitch flexing.

CURE: Distribute weight in boat forward. Full fuel cans can be moved up over axle. Check tires to make sure inflation pressure is equal on both sides of trailer. If a cheap bumper hitch is being used, remove it and install a frame-mounted hitch. If these changes do not correct the fishtailing, then move the axle assembly slightly to the

rear of its present position; from four to six inches is usually enough.

SYMPTOM: Grinding, screeching noises emanating from trailer.

CAUSE: Chances are wheel bearings have begun to chafe from lack of lubricant, high temperatures, or an overloaded condition.

CURE: Pull off road and check bearings. Pull wheel and make sure plenty of grease is packed around bearings. If they're hot, dry, and rough, better not tow the trailer any further until new bearings and races are installed. You should carry at least one spare set of wheel bearings and races for your boat trailer.

SYMPTOM: Clatter and clumping noises from trailer.

CAUSE: Loose hitch ball, loose hitch clamp, or loose wheel lug nuts.

CURE: Tighten hitch ball securely, pull hub caps and check for loose lug nuts. Tighten all bolts for safety.

DO'S AND DON'T'S OF BOAT TRAILER LAUNCHING

NEVER permit anyone to enter water with bare feet when assisting at launching site. There can be unseen broken glass, bottles, etc. Use old canvas or leather-soled shoes.

NEVER carry motor on transom in the up position. Road jolts may shear the locking pins.

Use bolted-to-frame trailer hitch — **NEVER** a clamp-on bumper type.

Make sure ball and hitch are proper size, properly matched.

Tighten hold-downs on boat and winch to make sure boat does not move or shift.

Have proper light connections for state in which you will travel. Day: stoplight or flashing signal. Night: stoplight, flashing signal and clearance lights.

Make sure you can see the roadway thru rear-view mirrors behind. Two mirrors may be required.

Secure light objects in boat or car; at highway speeds they may be sucked or blown out.

Slow down on rough roads. This will save a wooden hull from opening seams and a plastic hull from splitting.

Have someone outside of car to rear and side of boat to guide you to the water's edge when preparing to launch.

Be sure motor is in raised position for launching.

NEVER put trailer into water over the wheelbearings without washing and repacking bearings to avoid freezing or rust. A trailer that breaks (tilts) in the middle is best.

Shut off engine, be sure to set emergency brake and gears in park, and have, if possible, a driver with foot set on emergency brake for additional caution.

Check drain plug in boat to be sure that boat will not fill with water.

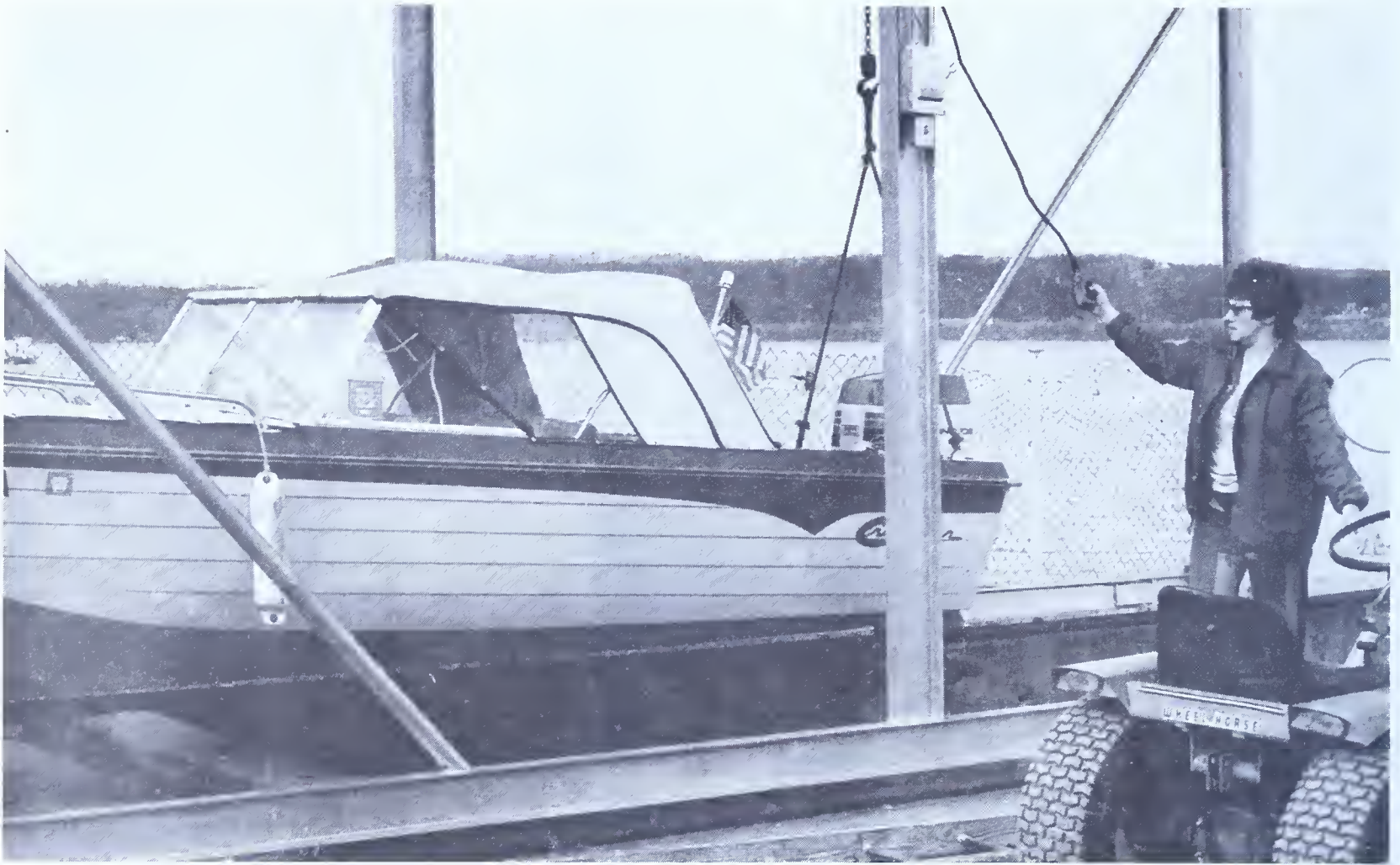
Be sure paddle is in boat before leaving trailer, to enable rider in boat to maneuver to shore or pier.

Be sure to board from shore over the stem, or from pier step into middle of boat.

Park car and trailer as soon as possible. Make way for the next person.

Be sure all equipment is on board as required for a safe boat trip.

Watch your wake . . . *you are responsible for any injury or damage resulting therefrom.*



An ideal family "compromise" boat. A windshield to block spray, canopy for shade, room astern for fishing.

Ashore & Afloat

by Gene Winters

Every fisherman wants to improve his skills and increase his catch. To help him do so, fishing tackle manufacturers offer a dazzling array of paraphernalia. Scores of catalogs,

brochures and booklets are distributed filled with guidelines to selection of rods, reels and lures as well as offering countless fishing tips. Boating, great sport that it is in itself, is but a logical equipment extension for the avid angler. You simply can cover more water in a given amount of time from a boat than you can standing along a shoreline. If the fish move out, what can you do? Jump in a boat and go right out after them! But when an angler goes out to purchase a boat . . . the costliest piece of fishing tackle he will ever own . . . he is soon lost in a sea of advertising claims replete with glowing adjectives and little factual information. The general theme seems to be, at least pertaining to seaworthiness, all boats are created equal; the inference being if you want a *better* boat, simply buy a *bigger* boat. Better at . . . and for what?

Fishermen, after buying the finest rods, reels and related equipment,

often assume if the price is right, any old boat can serve as a fishing platform. But, aside from safety and comfort, selecting the right boat the first time can actually save money in the long run. On the other hand, buying a discounted closeout unsuited for fishing — then spending extra money adapting it — may be false economy. However, when you are down to the final selection time, *only you can decide*: specialty boat or compromise . . . which boat is right for you!

For bass and other shallow water fishing, special boat designs are offered by many manufacturers, featuring maximum maneuverability. For small and protected waters, a shallow draft flat-bottomed boat is often ideal. For rough, deeper river waters, a good V-hull or modified V may be preferable because of greater comfort and control. The higher power of an in-board or sterndrive may also be better

A built-in battery well behind the light keeps the power source tucked neatly out of sight.



under rougher conditions although new, more powerful outboards are closing the gap. Where several persons may be fishing at the same time, a boat with a hull and deck that is open all the way around may be preferable, if not essential. Today's boats and options cover almost every potential fishing requirement but you must also know your boating requirement. For example, selecting the right boat for the type of water you will encounter is of paramount importance. We all too often see far too many people fishing in far too many boats not suitable for the particular water on which they are being used. This is not to say almost any boat selected will not be a compromise to some degree. So it is necessary to find a boat that is at least minimally safe and usable on as many different type waters as you envision

boating and accepting a compromise on some other points.

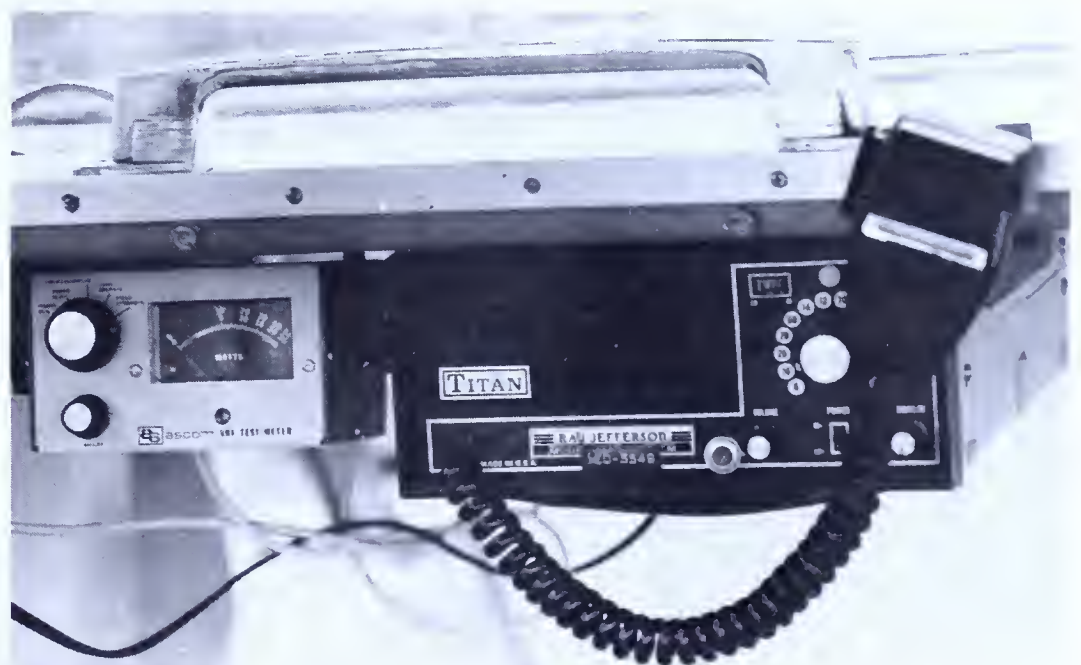
Many anglers would obviously prefer an open boat for "fighting room." Some of us will find that practicality, often spelled "*family*," indicates another area of compromise. Wind, rain, sun and other weather elements have to be reckoned with no matter where you boat and often dictate need for a small cabin, covered canopy, or at least a windshield to ward off spray. While the serious fisherman will cringe at giving up even an inch of fishing space, even the most hearty angler will find solace in the shade after some hot, fast fishing action under a sweltering summer sun.

There are many useful accessories available for boats that will either help a fisherman fill the stringer or make boating safer, easier or more com-

fortable. You may desire considering built-in ice chests, rod holders or brackets, anchor winches, battery wells or cases, bait storage bins and certainly not least important, comfortable *back-supporting* seats. Electronic fish finders, depth finders, CB or VHF-FM radios, electric trolling motors and other equipment, although not necessary, may be hard to resist. Keep in mind, though, a fishing boat is generally not a spacious houseboat and don't try to jam too much gear into a small boat.

Buying the right boat and selecting the proper optional equipment and accessories not only usually determines whether or not a person remains a boater but often whether or not that person remains an angler or hangs up the rods at the same time he sells the boat!

If help should be needed, a radio-telephone, either CB, or VHF-FM like this one, are an asset.



THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Bass eggs will hatch in four to seven days if the temperature of the water is favorable. A single bass nest may contain as many as 2,000 eggs, but scientists say that fewer than ten percent of them will become mature fish.

Anglers who fish for the so-called panfish are real conservationists. Panfish compete with trout, bass and other gamefish for the available food supply in any body of water, and they usually are so numerous that catching them has little effect on the whole population.

Grab a bass by the lower jaw, like the experts do, eh? Be careful! The hooks in the lure in the jaws of the fish can grab your fingers.

To give more flesh to a streamer fly, add a tiny strip of pork rind, not more than an inch in length and a quarter-inch wide. Use a sharp knife to cut the trailing end of the strip into halves, thus giving it two fluttering "legs."

Stream pools are natural cafeterias for trout. The riffle at the head of a pool carries food downstream. The deeper water in the body of the pool gives the trout protection. The shallow tail of the pool is the area

where trout cruise in search of surface insects.

Don't despair if there is no visible hatch of insects on trout water. Use a pattern of fly that is lifelike in size and buggy in appearance. Among such so-called attractor patterns are the Brown Bivisible, Royal Coachman, Light and Dark Cahills, Brown Spider, Hare's Ear, and Black Gnat.

Fresh minnows are better bait than the bottled variety. They look better, and whatever scent they give off is natural; not the odor of some kind of preservative used on bottled minnows.

The target to aim for is not directly atop a feeding bass or trout or directly into cover you suspect shelters a fish. Instead, cast a short distance away and let the current carry the lure to the "hot" spot. That way there will be less chance of frightening the fish.

For some real fun, try floating a deerhair bassbug like a trout fly on current at the head or tail of a pool. In other words, instead of making the bug struggle on the surface, let it float freely with the current.

The deeper a lure is fished, the poorer its color appears because of the factor of light

penetration into the water. Tests have shown that blue retains its color at greater depths than any other color. Red, a great favorite in all kinds of lures, no longer reflects much light at a depth of about 20 feet.

Streamer flies catch bass. The streamer should be allowed to sink well down into the water before the retrieve is begun, and the lure should be retrieved in short, jerky movements to make it look like a lively minnow.

Even with a quiet electric motor, the angler cannot let down his guard. Use the motor as sparingly as possible, and remember that just the shadow of your boat, with the motor at idle, can spook fish.

Fly rod lures often are more effective than plugs, spoons and spinners simply because they are more exact imitations of frogs, mice and large insects on which bass feed. Most of the time, even a hungry bass will look a lure over carefully before striking it.

Fish the shady side of a stump, boulder or other obstruction in the water. Fish like such areas because they provide protection from the direct rays of the sun, and they naturally will hold in the shadowed areas of the water.

The Brandywine, near Chadd's Ford, affords canoeists an opportunity to "stretch out" on a warm summer day.



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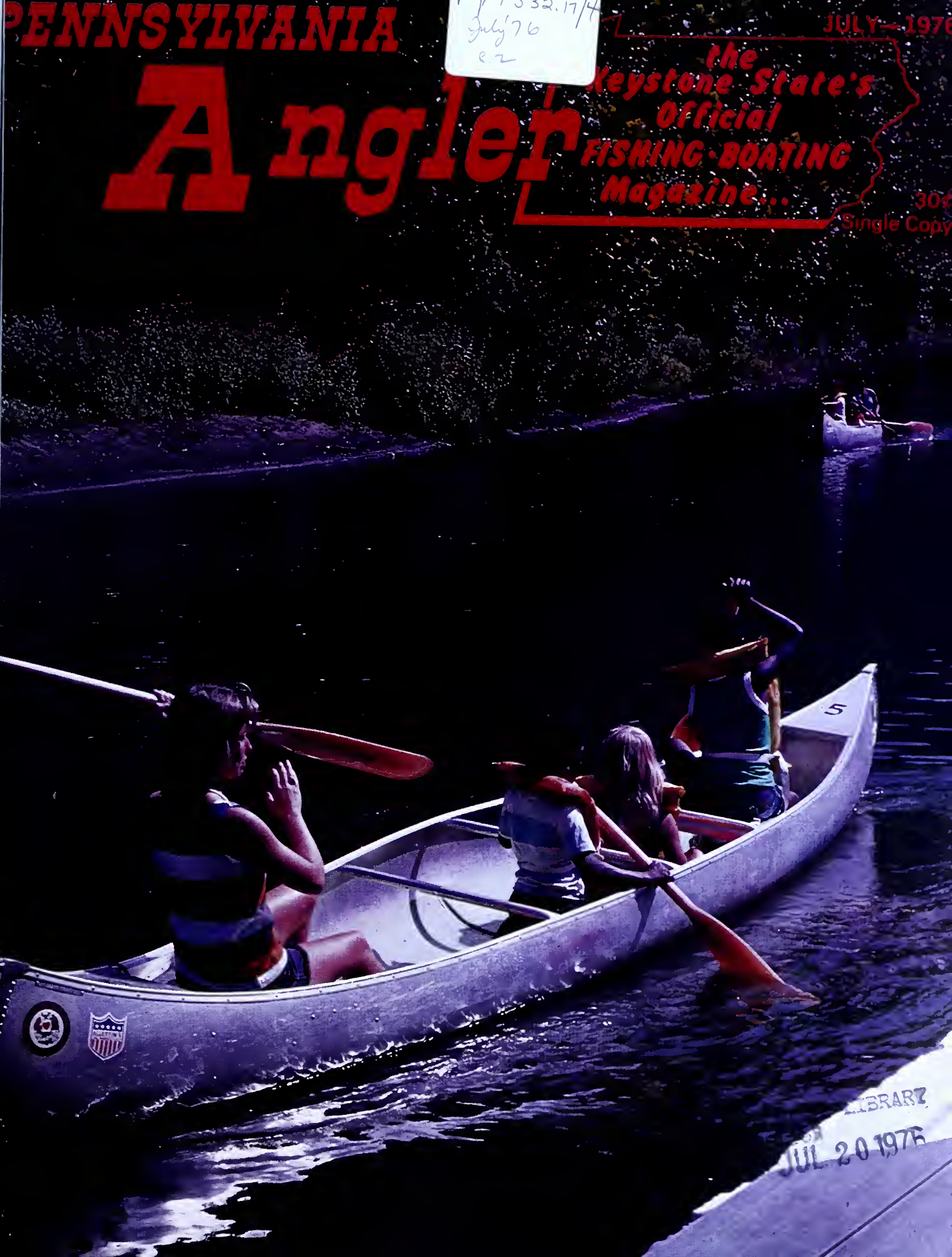
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YOUR BIRTHDAY PRESENT TO YOUR NATION . . .



In late April the Pennsylvania Fish Commission and the Pennsylvania Game Commission acted as hosts to the Northeast Fish and Wildlife Conference at Hershey. Fifteen northeast states and five Canadian Provinces sent their top administrative technical staffs to Hershey to deliberate the latest technologies in fisheries and wildlife management and to exchange views relating to common problems and espoused solutions. It was a great Conference — the largest ever convened in the northeast section of the United States — with over 720 registrants and an overall attendance of possibly 1,000.

For Pennsylvanians it is always refreshing to see visitors to our Commonwealth amazed to find that, even in the jaded northeast, we are still over two-thirds forested and have so many of our nearly 29 million acres still available to fishing and hunting. Sixteen directors and staffs from the New England area spent their last day en route to their homes visiting our Penns Creek Fish-For-Fun area. They were unanimous in their praise of our preservation of such a means to expose one's soul to the creation as the Creator intended.

We have often alluded to the great work performed by the Department of Environmental Resources with concerted effort from our own field forces and staff in providing new fishable waters in the Commonwealth. We are so grateful for the availability of over 2,000 more miles of fishable streams this year (as compared to ten years ago) that we become highly incensed at the loss of any of these gains due to poor manners and the slobbishness of some who use them.

Surveys of fishermen have revealed that among the things an angler values most, after a memorable day on the stream, are not the size and number of fish caught, but the purity of the water and the aesthetics. Surely, aesthetics are equally high for boaters. You can do more to improve the quality of your outdoor experience by removing the litter about you than your Commission can by stocking more big fish.

1976 will undoubtedly see the highest number of license sales (to date) since our beginning 110 years ago. Water quality in the rivers, lakes and the streams of the Commonwealth has improved almost at an equal pace with its population; and, as that quality improves, fishing improves. But, just as the license sales and angler participation reach record proportions, so do the insults to the environment. Not only by anglers, but by those who, without contribution, take advantage of these achievements. We had more streams removed from public angling this year than any time in our history! Why? Because of the manners and behavior of those participants (a very small minority) who do not realize that their selfishness is the greatest sin of all.

We have made some strong statements recently about the slob fisherman; and, very frankly, we do not have within our purview the power to eradicate him, or the expertise to convert him. We do have the backing of generations of outdoorsmen, however, who are repulsed at the sight of litter.

How do we go about removing these insults to our otherwise beautiful streams? It's really not hard at all. Instead of carrying a fishing basket, take along a litter bag the next time you head out for your favorite fishing hole. Pick up those cans and bottles! You'll be amazed at how quickly a rural junkyard can be converted into a virgin-looking wilderness. If you fish a small stream in an unpopulated area, chances are that a couple of outings and very little loss of angling time will be enough to shape up a couple of miles. If you run across an item too large to pack, drag it to the nearest point you can reach by car and pick it up when you leave.

For larger streams (or larger problems), you may need help. Talk it up at your local sportsmen's club, Scout Troop, or environmental classroom. Watershed Associations, "Adopt-A-Stream" organizations are naturals and many have already taken on such projects. A family outing could not only clean up the favorite recreational spot and make future outings more pleasant, but would also serve as a valuable lifetime lesson against contributing to our national sickness of polluting and littering. Another bonus: some of the results may rub off on those thoughtless slobs who threw the cans. It has been noted that usually after an area has been cleaned up — further littering almost stops.

Our efforts to gain legislation against no-deposit, no-return containers are meeting the usual lobbyist resistance. In the meantime, you can clean up your favorite recreation site. 1976 is the time to do it . . . your birthday present to the United States of America could be saving your stream from posting against fishing for the next 200 years. GO GET 'EM!

Ralph W. Abele,
Executive Director

Pennsylvania Angler

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Volume 45 - No. 7

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CONTENTS

Canoeing on the Canal by J. H. Fitser	8
Marsh Creek Lake by George E. Dolnack, Jr.	12
Terrestrials - Time & Tactics by John Crowe	17
Worms, Cranks and Blades by Nick Sisley	20
For Wives Only by Paula Ford Cameron	27
National Safe Boating Week by Alan MacKay	28

Front Cover: The City of Allentown made good use of an old landmark, the Lehigh Canal, for wholesome summer recreation. The story of the Lehigh Canal Park, and how it came about, appears on pgs. 8-11.
Photograph by the author, J. H. Fitser

Back Cover: Marsh Creek Lake is providing southeastern Pennsylvania anglers with some exciting fishing. Philadelphian William Lacy is certainly the picture of contentment. See story on pgs. 12-15.
Photograph by the author, George E. Dolnack, Jr.

MONTHLY COLUMNS

FISHING OUTLOOK	2	STREAM NOTES	24
LEAKY BOOTS	4	ANGLER'S NOTEBOOK	25
TAKING A CLOSER LOOK	6	ASHORE & AFLOAT	30
CO-OP NEWS	32		

James F. Yoder, Editor

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"Jockey Hollow" boat launching facility is shown on the Youghiogheny near the Route 40 bridge.

fishing outlook

by george e. dolnack, jr.

Exclusive of Lake Erie, Pennsylvania's public lakes offer nearly 100,000 surface acres of water to the fisherman. From the popular bluegill to the mighty musky, there is something for everyone statewide. And one needn't look too far from home to find his "Lake for all Seasons."

In southwestern Pennsylvania, the impoundment that fills the bill for anglers and boaters year-round is 3566-acre Youghiogheny Reservoir tucked in the mountain folds of Fayette and Somerset Counties, near Confluence. This body of water, which extends into Maryland, is maintained by the Corps of

Engineers. However, the Pennsylvania Fish Commission manages the fishery in the Pennsylvania portion.

Besides being a favorite recreational facility, the reservoir provides flood protection for cities in the Youghiogheny, Monongahela and upper Ohio River Valleys. It also regulates the downstream flow during periods of low water.

The bottom closely follows the original topography of the land and it is considered a deep-water lake. Its low fertility and lack of shallow water habitat contributes to the slow growth rate of young fish according to Blake Weirich, Area Fisheries Manager. But, he adds, the lake has one of the most diverse fish populations in the area and the larger fish do quite well.

Bud Flyte, Somerset County District Waterways Patrolman, reports that the lake's fishing outlook is no less than great and that most species prowl the whole impoundment.

King of the gamefish in the reservoir, he said, is the northern — which ranges up to 40-inches. And he is quick to point out that the former state record for this fish: 42½

inches, was caught here in 1970. Flyte advises that the top bait for these sharp-toothed predators is a large minnow and that the best time to fish for this member of the pike family is during the fall or thru the ice.

Anglers can also expect some good musky fishing in another three or four years. Fingerling tiger muskies were planted in the reservoir last August and shouldn't take long to reach the legal size of 30 inches.

When it comes to walleyes, Youghiogheny Reservoir ranks up near the top. There's a healthy supply of them here and they range up to 30 inches. Minnows and the customary walleye rigs take many of these fish. Though they are taken throughout the season, the most productive time to fish for them is during the fall and thru the ice.

Trout running 16- to 22-inches long are also taken from the reservoir. Flyte said that they were planted in the lake three years ago and gorge themselves on worms and crayfish during the spring.

Also scattered about the impoundment in good numbers are small-

mouth bass up to 22 inches. Fall fishing turns up the best catches on worms, crayfish, spoonplugs and jigs. Its cousin, the largemouth, is caught on occasion too.

In the panfish category, Flyte said that impressive catches of crappies are made. He says that the schools are localized and suggests fishing the Route 40 bridge area and around any fallen tree or underwater formation. Small minnows an inch-and-a-half long and crappie jigs take full stringers of these 9- to 12-inch fish in late summer and fall.

The yellow perch is also much sought after on the Youghiogheny. They go for small minnows, worms and jigs in a big way. Anglers find that they have the most luck during late summer, fall, or through the ice with this member of the finny tribe that averages 9- to 12-inches.

Very few bluegills are caught here, but those that do fill fish baskets go about 9-inches or so and fishermen do best in the summer months according to Flyte.

Besides the action in the reservoir, the dam's tailrace also has some excellent fishing. Trout up to 15-inches are the most popular species and it's "put-and-take" fishing with some holdovers. The tailrace is classified a high pressure area and is stocked with federal fish eight to nine times a year says Flyte. Shore and wading fishermen find

salmon eggs, worms and spinners the top fish-getters. Tailrace trout fishing is permitted year-round from the outflow to three miles downriver.

The tailrace also provides some fine walleyes that measure up to 25-inches. Flyte said that these fish were not stocked and are apparently supplied by natural reproduction in the reservoir. Fall fishing is best with some real hot periods in spring and summer says Flyte. He recommends trying minnows, worms and jigs for ol' shiftless.

Bluegills, crappies, perch and catfish are also found in some areas downstream from the reservoir. But most of the time, the cold water draw limits the response of these lightweights. However, fishing for them improves during the warmer months.

There are four boat launching areas on Youghiogheny Reservoir. The Pennsylvania Fish Commission maintains the Jockey Hollow facility on the west side of the Route 40 bridge. Others are located at Wilkins Hollow near the breast of the dam, at Braddocks Run on the southeast shore, and Tub Run on the west shore, off Route 281, and are maintained by the Corps of Engineers. Boat rentals and docking services are provided through concessionaires located at the Somerfield Recreation Area on the east

side of the impoundment near the Route 40 bridge.

Two recreation areas feature camping. The Tub Run campground is located 3 miles south of Confluence off Route 281 and has tent and trailer sites with dumping facilities, toilets, showers, tables and fireplaces. This site is open all year.

Below the reservoir, one mile south of Confluence, off Route 281, is the Youghiogheny camping area that also features tent and trailer sites with chemical toilets, fireplaces and tables.

Other overnight and vacation accommodations are available near the lake. A bait and tackle shop can be found in nearby Confluence and picnic areas are liberally scattered around the perimeter of the lake.

Reciprocal fishing privileges exist between the state of Maryland and Pennsylvania. Persons having a valid Pennsylvania fishing license may fish from a boat anywhere on Youghiogheny Reservoir — including the Maryland portion. When fishing in Maryland, anglers are bound by the fishing rules and regulations of that state.

Further information on the Youghiogheny Reservoir recreation facilities may be obtained from: District Engineer, U.S. Army Engineer District, 1000 Liberty Avenue, Pittsburgh, Pa. 15222.

The Youghiogheny's tailrace area is popular not only with anglers, but many campers as well.





ABOUT UNCLE OTTO . . .

I hope that you will consider this application for the Pennsylvania Angler Fishing Citation for my great uncle, who fishes with us in the Allegheny Reservoir in between trips to Canada, "for the beauty of Pennsylvania."

About my Uncle Otto: as a fisherman, he has the best sense of humor, temperament, knowledge, and if I were half the fisherman he is I would probably get along with my wife (who takes after him), and I would probably catch more fish.

Last October, we were trolling the upper arm of Kinzua Creek, and he tied into a very good size musky; but, with me at the wheel of the boat, he lost it. I was quite upset, but he turned around in the seat, smiled, and said, "Next year he will be really fat." The next day Uncle Otto and his son went out again and this time brought back to the camp in Marshburg a 33-inch, 12-pound walleye — the largest walleye he has ever caught . . . and that's counting Canada! The fish was measured and weighed at the Kinzua Corners Bait shop in Marshburg, Pa., and then taken home and mounted. The photo hangs in the bait shop in Marshburg.

JOHN P. VOBORNIK
Euclid, Ohio

NOT GIVING UP!

I would like to relate an experience that happened to me while ice fishing at High Point Lake in Somerset County on January 27.

My buddy and I were there on a two-day excursion. The first day netted us a good time, but no fish. The second day I had one 16-inch walleye on the ice when a raging snowstorm hit. It was snowing so hard I had to move my tip-up closer so I could see it if the flag went up. After getting it set up, I checked my other holes and removed the ice that formed in them. But when I checked my last hole, something was missing! My tackle box, which I had my rod and reel sitting behind, was there, but my rod and reel

weren't. After checking the ice (I was hoping it wasn't what I thought) to make sure I hadn't misplaced it, and not finding it, I accepted the reality of what had happened. A fish took my bait, line, rod and reel — everything — pulled it over my tackle box and right through the hole in the ice!

After telling my buddy what happened, he told me that he and some other fishermen to whom he had been talking, heard a loud clanging noise. After checking their riggings, however, and finding everything in order, they thought nothing more of it.

Now there is a fish swimming around High Point Lake with my rod and reel dangling from its mouth. You can be sure I'll be back there very soon to get that fish and my rod and reel. I'm not giving up without a battle.

CRAIG NEMCHIK
McKeesport

ANOTHER ONE!

I would like to add our experience to that of Charles F. Young (Leaky Boots — March '76 issue).

We were fishing on Georgian Bay, off Manitoulin Island, last summer — bass fishing and anchored at the time. I was sitting in the bow of the boat, when all of a sudden there was a strange chomping noise behind me. I looked around and a large northern pike was swimming on top of the water — opening and closing its mouth, scooping bugs off the water and eating them.

My husband and 14 year-old grandson were in the boat and saw it also. It was so intent on feeding, it was only three feet from the boat and swam on by, chomping away.

I do not believe that old saw that fish won't bite because of a tender mouth! We have been told by others — residents, Indian Guides, (which we do not use) and other fishermen not so lucky as we. That is a good excuse. We have always brought back our limit for relatives and friends to enjoy.

"GUSSIE" GOODWIN
Eighty Four, Pa.

BIG SPRING

The new regulations for Big Spring designed to produce a "trophy" brook trout fishery very encouraging, but they raised certain questions. Several years ago, the headwaters of the stream were closed to fishing, as I understand it, because of research on the native brook

trout population. This occurred within the same period as the construction of the hatchery near its source. Reputable Cumberland County fishermen claimed that this construction precipitated a marked decline in brook trout numbers and reproduction because of increased water temperatures, pollution, siltation, etc. In light of the new regulations and these claims, I would like to see some information on wild trout and natural reproduction in Big Spring. Will the trophy fishery be managed for native brook trout, or will it depend on hatchery fish? What are the facts on water temperature and quality before and after the hatchery was built? Perhaps you could publish the results of the research conducted while the headwaters were restricted.

I think this information would contribute to the success of the project by ending much of the conjecture which now surrounds the stream.

ANTHONY J. GERACE JR.

Dear Mr. Gerace:

I have worked intensively and extensively on Big Spring Creek, Cumberland County. Big Spring Creek is a very complicated ecosystem—attempting a simplified explanation may not do justice to the situation.

Big Spring Creek is a very productive trout fishery, probably one of the most productive in the world. However, since the installation and operation of our hatchery, several changes have occurred in Big Spring Creek and the stream is not the same as it was previously.

Construction of the hatchery facility with its attendant soil disturbance and erosion temporarily disrupted Big Spring Creek. These conditions are stabilized now.

The discharge from Big Spring Hatchery is treated and supports naturally reproducing populations of brook, brown, and rainbow trout. Big Spring Hatchery started producing in 1971-1972. A malfunction in the treatment plant resulted in poor quality effluent; at the same time, a significant number of rainbow trout escaped and have resulted in a naturally reproducing population of rainbow trout. Both the plant malfunction and escapement of trout from the hatchery have been corrected.

Stream improvement operations at Big Spring Creek included removal of Thomas Dam. This act was the single greatest improvement to that environment, as it returned to a flowing stream that portion previously impounded. Filling in Thomas Hatchery, a source of fish disease, also improved downstream reaches of Big Spring Creek.

It is true that in the years since 1972

survival of young-of-the-year brook trout is not what it was in earlier years. I do not doubt that adverse effects of our hatchery effluent have contributed to their decline; however, there is at this time successful natural reproduction of brook trout and each year class is becoming stronger. I believe that Big Spring Creek can be managed for natural reproduction of brook trout, but competition from naturally reproducing populations of rainbow and brown trout are unquestionably contributing to the decline of the wild brook trout in Big Spring Creek.

October 1975 trout population estimates on the 8,000 foot section now under special regulations indicated 1,142 brook trout, of which 2 percent were over 15 inches, 899 rainbow trout, 43 percent over 15 inches, and 682 brown trout, 72 percent over 15 inches. Our decision to manage for brook trout is a sincere commitment by the Pennsylvania Fish Commission to enhance naturally reproducing populations of brook trout wherever they are found. Deterioration of naturally reproducing populations of brook trout as a result of their inability to compete with rainbow and brown trout, habitat deterioration, and exploitation is well documented both in Pennsylvania and throughout the brook trout's natural range. Our decision to manage Big Spring Creek with a 15-inch size limit protects an estimated 98 percent of the brook trout population. By permitting a two-trout creel we are encouraging exploitation of the large numbers of brown and rainbow trout. Under the present situation at Big Spring Creek, I believe this management was an entirely rational decision.

Thank you for your concern about Big Spring Creek. We are also concerned and are attempting the best management possible.

RICKALON L. HOOPES
Fisheries Technician

BOTHERED!

I am writing about something that bothers me greatly. Why do human beings (so-called) have to put their fingers in fishes eyes to remove hooks? It is so cruel to throw a blind fish back in the water. I love to fish but this cruelty has me wondering if I have picked the right sport. Am I wrong about this?

Also, what a wonderful boy Jeff Nissle must be. I also pick up lines, etc. I wish we had more like him instead of the wise guys. I recently cut loose a bird which had been dangling from a bunch of monofilament line in a bush. We have such beautiful streams and lakes in Pennsylvania; but, how people abuse the privilege of using them!

I am a woman and I love the Angler. Read it cover to cover.

VIRGINIA SNYDER
Easton

Virginia, if we were to abandon every pursuit at the first sign of cruelty, ungentlemanly (WHOOOPS! *unwomanly*), or "unsportspersonlike" conduct, wondering whether or not we'd chosen the right sport, there would be little or nothing to do. Certainly we couldn't turn on the tube! Personally, I've never found the need to grasp a fish by the eyes — neither should you. The fact that some do doesn't dim my enthusiasm for pursuing the sport as I choose.

Yep, we could do with "wall-to-wall" Jeff Nissles! Ed.

A FIRST?

I am two things: a) a longtime subscriber of the Pennsylvania Angler; b) a transcriber of English Braille. I would like to transcribe the article titled, "A Cold Water Primer" by Alan MacKay in your March, 1976 issue.

I would have it processed and bound by the Rodef Shalom Sisterhood with whom I am associated, and consigned to the Library of the Western Pennsylvania School for Blind Children here in Pittsburgh for their use.

LANE JOHNSON, JR.
Carnegie

Correction: please change "two" to "three," and add: "(c) a very compassionate, warm-hearted human being." Naturally, permission is granted. The Fish Commission and the author are flattered. Ed.

GOOD SPORTS!

Always enjoy the Pennsylvania Angler but feel the sportsman using our waters don't get the credit they should, while the litterers, unlicensed fishermen, or fish hogs get all the publicity.

As an example of the nice fellows one meets, I'd like to tell you of my experience while shad fishing last year in the Delaware. Seems I foul-hooked a musky (just over legal size) with a dart while standing elbow-to-elbow in waders 20 feet from shore. At least 10 fishermen pulled in their lines, walked to shore and cheered me on while I fought, landed, measured and released the fish. They all

gave up 10 to 15 minutes of pleasure to give me a better chance to land the fish. Real sportsmen.

(Name withheld at writer's request.)

WATCH IT!

I received my March 1976 copy of the Pennsylvania Angler and found that it had been read through by someone else. They had been smoking and burned a hole through pages three and four.

I know that I can't stop people from reading the magazine going through the mail, but I was wondering if a small seal put over the edge of the pages could be put on and opened by the person it is sent to?

Could you please send me a copy of column one on page three if possible.

CHARLES W. EFFINGER, JR.
Denver

We'll do better than that, Charles, we'll send you the entire magazine! Regarding that "seal," almost anything is possible, I suppose, if one can accept its cost. We'll have to hope the "eavesdroppers" at least hold the smokes 'til they're finished reading your Angler! Ed.

BUYING A BOAT—

I noticed in your March issue (1976), Leaky Boots number one was someone who was against having an angler's magazine printing boating articles. Well, as I did last year, I have to speak up in favor of the magazine. *Fishing and Boating do definitely go together.* As I said before, I do not have my boat anymore, and I like fishing from shore and docks. But I also like (even a little more) using a boat . . . especially for drifting.

In 1975 I fished the Kinzua Dam area, and I mean all of it, from the New York line all the way down to below the breast of the dam. I did this from the shoreline as best I could without the use of waders or a boat, and I did pretty good, a few bass, several perch, and even one musky. This year I am again going to fish all of it, and I do mean *all of it*. And yes, I am going to use a boat. With the aid of a boat and a locator, I will be able to get out to them "way out there spots" and also those drop-offs that in no way can you follow and troll over without a boat. But, I will also do a great deal of bank fishing. I will probably get the boat and locator the same way I got the one I had several years ago — the installment plan.

PAT CANCELLA
Ridgway



Taking A Closer Look

by Tom Fegely

AMPHIBIANS AS PETS

This is the second in a two-part series dealing with the care of Pennsylvania's reptiles and amphibians while in captivity. It is written as reference material for school teachers, scout leaders, and others who regularly advise youngsters in the proper methods for successfully handling these "temporary" pets. In all cases it is suggested that the animals be released to their natural habitats several weeks prior to hibernation time.

Within the confines of Pennsylvania's borders crawl, creep, hop, or swim 34 members of the Class Amphibia. These creatures are characterized by the common bonds of cold-blood (blood temperatures vary with that of the environment), moist skin, and habitats with ample water or moisture. During the warmer months of the year wandering youngsters frequently cross

paths with these interesting critters and many amphibians end up living in temporary quarters ranging from tin cans to 50-gallon aquariums. Unlike reptiles, which can condone periods of dryness, amphibians will die if subjected to long periods without moisture.

Since the Amphibian clan is made up of a great variety of animals ranging in size from the tiny Northern Cricket Frog (*Acris gryllus*) to the ugly Hellbender (*Cryptobranchus alleganiensis*), it would be impossible to outline their individual needs in these two pages. Therefore, the many frogs, toads, and salamanders found in Pennsylvania have been categorized into eight groups—each group member having similar requirements for life. Information for the care and feeding of these "temporary pets" is outlined in the following chart.

SPECIES	TYPE OF CAGE	FOOD	MISCELLANEOUS
SMALL AQUATIC SALAMANDERS			
Northern Red Salamander Northern Spring Salamander Appalachian Seal Salamander Red-spotted Newt (water stage)	Aquarium or large jar partially filled with water. Gravel bottom with plants such as Elodea and Anacharis available from tropical fish stores.	To avoid fouling water in permanent cage remove salamanders once each week to another container of water. Drop in bits of earthworms, beef and liver. Allow reasonable time for feeding then return to aquarium.	A floating plant or piece of wood provides a resting place on which the salamander can cling when it surfaces for air.
LARGE AQUATIC SALAMANDERS			
Mudpuppy Hellbender	Partially filled aquarium for hellbender. Full aquarium with filter and air bubbler for gill-breathing mudpuppy. Dense growth of plants for each. Lid atop aquarium to prevent escape.	Minnows, earthworms, insects, small crayfish, bits of liver and beef, etc.	Both of these large salamanders make unusual pets and must be kept in cool places.
SMALL TERRESTRIAL SALAMANDERS			
Northern Dusky Salamander Long-tailed Salamander N. Two-lined Salamander Allegheny Mountain Salamander Slimy Salamander Ravine Salamander Wehrle's Salamander Four-toed Salamander Red-backed Salamander Jefferson Salamander Red Eft (land stage of newt)	Woodland terrarium with moss, small ferns, leaves, and pieces of bark and small flat stones. Small dish with fresh water and "ramp" for easy access. Lid or cover of screening, cheesecloth, or glass. Do not allow temperature to get too high.	Insects, slugs, earthworms, mealworms, spiders, liver, beef, etc. Live food may simply be "stocked" in cage while other foods should be fed to individuals on the end of a toothpick.	Sprinkling bottle can be used to keep satisfactory moisture level in terrarium.
LARGE TERRESTRIAL SALAMANDERS			
Spotted Salamander Marbled Salamander E. Tiger Salamander	Woodland terrarium similar to that used for small salamanders but with larger pieces of bark, flat stones, etc. Large dish with water.	Snails, slugs, millipedes, centipedes, earthworms, mealworms, insects, etc.	These salamanders are more secretive than their smaller cousins and typically feed after dark.
SMALL FROGS			
Chorus Frog Mountain Chorus Frog E. Gray Tree Frog N. Spring Peeper N. Cricket Frog	Woodland terrarium with small "pool". Small ferns and branch for climbing. Cover of cheesecloth or fine-meshed screen necessary.	Live flies, gnats, mosquitoes, small mealworms and earthworms, etc. Bits of beef or liver fed with toothpick.	Never place these frogs with other larger frogs as these midgits will be eaten by them.
LARGE FROGS			
Bullfrog Green Frog N. Leopard Frog Pickerel Frog E. Wood Frog	Semi-aquatic aquarium made up of four or five inches of water and rocks, gravel, driftwood, etc. Lid necessary.	Earthworms, minnows, insects, small crayfish, grubs, caterpillars, beef, liver, lean hamburger (latter three items must be fed on toothpick.)	Never keep any smaller frogs in the same cage with large bullfrogs. Try to keep all captive frogs about the same size.
TOADS			
American Toad Fowler's Toad E. Spadefoot Toad	Woodland terrarium. Loose soil in which to burrow and water dish in which to soak. Moss and debris under which to hide.	Caterpillars, earthworms, most insects, crickets, small grasshoppers, etc.	Terrariums used for decorative purposes are not well-suited for large toads as they have a tendency to uproot plants.
TADPOLES AND LARVAL SALAMANDERS			
	Aquarium with aquatic plants and air bubbler.	Tropical fish food, chopped worms, insects, liver, beef.	Gather specimens from streams and ponds in early summer.

*Making use of the old canal,
the City of Allentown
is able to provide recreation
all summer long.*



Canoeing on the Canal

by J. H. Fitser



Young canoeists who have been indoctrinated in safe boating practices enjoy the "great outdoors" without really being far from home at Allentown's Lehigh Canal Park.

With open spaces and recreational facilities at a premium in cities, every nook and cranny must be investigated and utilized to its capacity. The City of Allentown, in Lehigh County, has begun to turn an abandoned, overgrown canal into a vital part of its recreational park system.

Paralleling the Lehigh River, from which it draws its water, the old canal was formerly used by the Lehigh Coal & Navigation Co. to haul coal by mule-drawn barges.

The city currently owns a 2.7-mile stretch of the canal which it will develop as a part of its already extensive parks program. During the summer of 1975, the city began an educational program of watercraft safety and canoeing instruction for children using the city's playground.





One of the skills learned is maneuvering canoes in crowded quarters such as at docks or at the boathouse.

At the time the program was instituted, there was a 1.2-mile section of the canal open for use in the program, as well as canoe rental and launching facilities for the public.

During the summer of '75, the city of Allentown began a four-week program of busing children twice weekly from four or five different playgrounds to the canal park for instruction and use of canoes on the canal. Employees of the city provided instruction and guidance for the youngsters, many of whom had never been near the water previously. The number of children ranged anywhere from 35 to 60 each day of the instructional program and the city plans to expand the program next year as interest grows.

In addition to the instructional program for the city's youth, the canal park is also open to the public for launching of nonpowered watercraft, as well as rental of the 15 city-owned canoes. The cost of canoe rental for 1975 was \$1.50 per hour, including required PFDs. (Driver license or money deposit required.) They hope to be able to maintain that price for the 1976 season, operating on a daily basis from mid-June through Labor Day, as well as on weekends earlier and later than those dates, as long as weather permits. Hours scheduled, but sub-

ject to change as further plans develop, are from Noon to 8:00 p.m.

In talks with representatives of the city, it was learned that the success of the program was rated very high, both from the instructional standpoint and public use, in spite of the fact that it was a new program. The facility was used by people from Lehigh and surrounding counties, including the Philadelphia area. As one example cited, there were some 56 rentals the second weekend in August alone. There are also 3 pedal boats on order which will be available for rental by the public next season. (1976)

Once the program of cleaning up the entire stretch of city-owned canal is completed, boating will be available from the city of Allentown to neighboring Bethlehem. Bethlehem is currently working on its own development and eventually it is hoped by area officials that the canal will be navigable from Allentown to Easton.

In addition to the actual canal park program, the city has also developed two launch sites from the canal access into the big Lehigh River, in cooperation with the Pennsylvania Fish Commission: one at the Kimitz Lock at the northern end of canal park, and one at the scene of the city's canoe rental facility and picnic

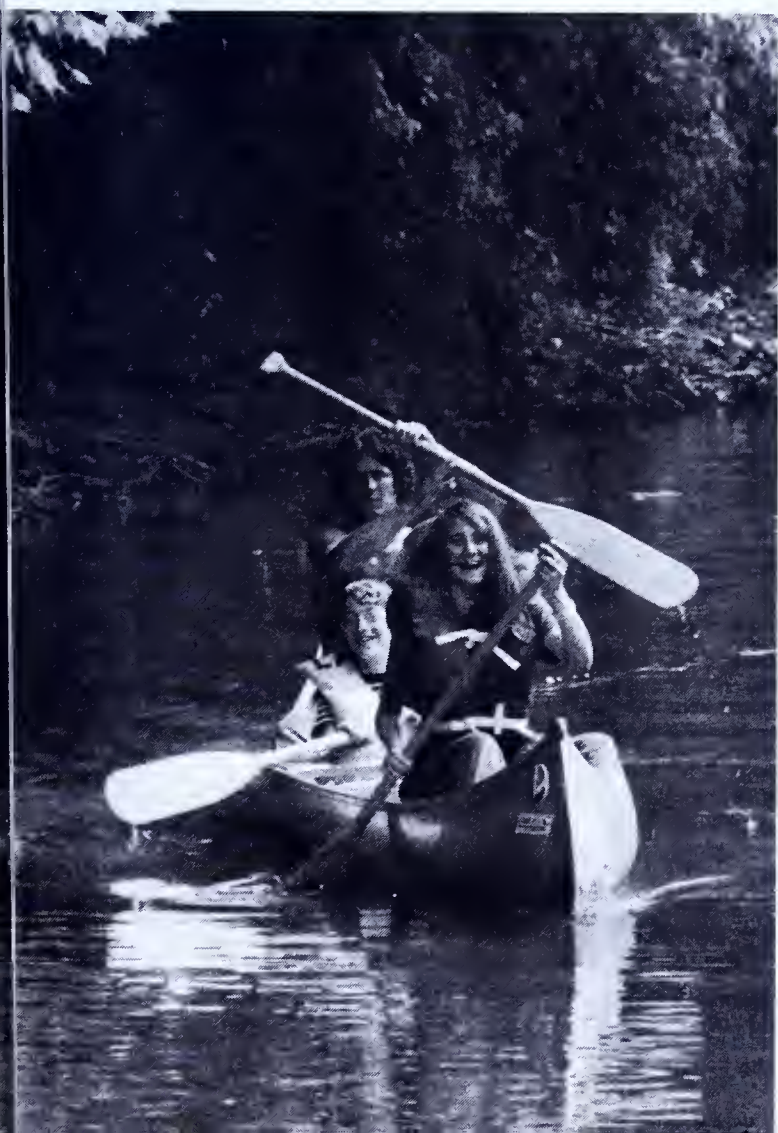
pavilion further downstream. Once the system is completed, it is hoped that the Fish Commission will be able to take a biological look at the canal and institute a stocking program if needed. According to Lehigh Co. WWP Fred Mussel, there are quite a few fish already in the canal in some sections and stocking may not be necessary. Plans will be contingent upon dredging and cleanup, as well as water survey results in the future.

Costs of the city's Canal Park program were estimated at nearly \$375,000 (as of early September 1975), with monies coming from the local Trexler Foundation Fund, the Pennsylvania Department of Community Affairs (Project 500), and the City of Allentown. Canal Park will be maintained and operated jointly by the city's Department of Parks and the Recreation Bureau.

Programs such as this are becoming more vital to crowded cities across the state and will provide necessary recreational and educational outdoor facilities for citizens who want and need them. Why not look around your city and see what can be done with currently unused or underused sections of land or waterways. You may be surprised to find opportunities you were unaware existed.



Youngsters and their instructors, above, await the return of a canoe for their session on the water. Bob Cohen, below, instructs a prospective canoeist in adjusting PFD. Smiles on those returning, right, indicate all had a good time!





A group of anglers hopefully measures one of Marsh Creek Lake's tiger muskies. Unfortunately, it was but 27½". In less than two years after planting, however, some specimens reached a whopping 34 inches!

Marsh Creek Lake

by George E. Dolnack, Jr.

photos by the author

I had just finished putting another fat bluegill on my stringer when my son, Pete, said excitedly, "Wow! Looks like one of those fishermen in the canoe got hold of a big one."

Sure enough, when I looked over their way, a rod was bowed way over under the strain of what appeared to be a lunker.

"Pull up the anchor and let's move closer. I want to get some pictures," I said.

As the electric motor moved our boat nearer, the fish — a sleek vertically green-striped tiger musky — was brought to net in a shower of water. The young boy sitting in the center of the canoe, eager to lend a hand, reached into the net to grab the fish. Instead, it worked the other way . . . the thrashing musky chomped down on the youth's left

hand with powerful jaws which held two rows of sharp teeth!

By the time I got to the canoe, the angler who had hooked the fish had it out of the net and with some assistance from his partner in the bow was measuring it. It taped out at 27½ inches and was returned to the water. Then attention turned to the boy who sat in silence, his hand oozing blood from the puncture wounds above his fingers.

The place was the F. Huston McIlvain Dam, located in Chester County's Marsh Creek State Park and more commonly known as the "Marsh Creek Dam." Without a doubt, this 535-acre impoundment located four miles north of Downingtown is becoming one of the most popular fishing spots around.

One of 11 dams proposed for the Brandywine watershed, the 2½-mile long impoundment serves the purposes of flood control, water supply and recreation. Its namesake, F. Huston McIlvain, was the first chairman of the Chester County Water Resources Authority and was

largely responsible for spearheading completion of the project.

The Chester County Water Resources Authority acquired the land with Project 70 funds as agent for the Commonwealth and conveyed to the state as a park area, 1,712 acres including the lake. Construction and development was performed by the General State Authority and the DER administers the park.

In November 1973, the water discharge valve was closed and a full pool of 4 billion gallons of water was reached by the following June. Incidentally, the outflow has the feature of discharging water into the Brandywine East Branch at three different levels. This design, one of the first in the state, permits the temperature of the Brandywine, downstream, to be maintained at an acceptable level to aquatic life.

Chester County District Waterways Patrolman Ray Bednarchik said that since the Fish Commission stocked the lake with fry and fingerlings in 1974 it has produced 34-inch

tiger muskies, 17-inch bass, 16-inch walleyes, 10-inch bluegills and 14-inch catfish. He said that some catches of black crappies were also made. In addition, he said, redear sunfish were also stocked and should be showing up on stringers this year.

The bottom of Marsh Creek is perfectly suited as a home for fish. Its characteristics are also a fisherman's dream and consists of the mainstream, feeders in each cove, submerged roads, walls, foundations, rocks, timber, brush, farm ponds, drop-offs and flats.

At the dam breast, the water is about 70-feet-deep and sharp drop-offs can be found on both sides from the breast back to the first coves on either side. Drop-offs can also be found off all prominent land points that jut out into the water. The slopes are less pronounced as you move north toward the turnpike; the mainstream takes a path, more or less, thru the middle of the lake as do the feeders, similarly, in the coves.

Though there is a light holdover

Worms were responsible for this stringerful caught by the "Meyers Boys" — Harry, Sr., and Harry, Jr.





Little Conestoga Road affords shore fishermen a good spot to pursue bass, muskies, and walleyes.

of smallmouth bass from the mainstream, the predominant species of bass is the largemouth. These were planted as fry in June 1974. Supplementing these fish are holdovers up to 25-inches from the submerged ponds.

Minnows, rattle type lures and plastic worms work well for bass. Any of the coves, drop-offs and weeded shoreline are good places to fish for them. The stream beds, underwater ponds and obstructions are also hot spots.

The arm on the north side of the Eagle launch facility is productive for muskies and walleyes. Big minnow-type lures, small suckers and large minnows fished from a bobber or drifted over the bottom take muskies. Trolling the eastern shoreline north and south of this cove is also a good bet.

The walleyes will go for minnows, jigs and small minnow-type lures. Look for the walleyes at the cove's mouth and for muskies and bass starting at the park boat dock. Since there is a westerly breeze most of the time, a good drift the length of the cove can be picked up and prove fruitful.

Little Conestoga Road that crosses the backwater near the turnpike is a favorite congregating spot for shore fishermen. The water here and along both sides of the shore is

relatively shallow. This is a good spot for bass, muskies and walleyes. Catches of muskies last year outnumbered the others here.

During September, October and November of last year, Joseph McAllister, of Upper Darby, took 40 muskies, four of which were legal. His technique was simple. He used a wire leader, split shot and three- to four-inch suckers hooked through the back and fished on the bottom.

Bluegills can be found almost anywhere but the best spots are along the shoreline where it is brushy and weedy. While worms fished from a high-low bottom rig will take them, the real killer is a 1/64 or 1/32 ounce dart or ice fishing fly, with a meal worm attached, and fished from a bobber.

Few crappies were caught last year since they were just getting established, but this year should see catches pick up.

Catfish can be caught nearly anywhere, and the backwater between Little Conestoga Road and the turnpike is good for suckers.

Most of the shoreline at Marsh Creek is accessible to fishing if you don't mind a little walking. And, anywhere you can wet a line is a good place to fish.

Because of the bottom structure, boat fishermen with depthfinders have a decided advantage over other

anglers. Boaters should also be equipped with an anchor rope no less than 50 feet long. Brush anchors are also handy.

The Lyndell, or west launch area, can be reached by turning off Route 282 onto Lyndell Road at the Lyndell Country Store.

The Eagle, or east launch facility, is reached off Route 100. Traveling north, take a left onto Little Conestoga Road at the Eagle Tavern, then take the first left (which is Lyndell Road).

On Marsh Creek, it's electric motors only. It's also a sailboater's delight because of the almost constant breeze that can sometimes become fairly stiff. Because of this, canoeists are advised to use caution lest they capsize when the wind picks up.

Larry Smith, Park Superintendent says that besides the two boat launching and mooring areas that are presently open, other facilities that will be available in the near future include: swimming and wading pools, picnic areas, hiking and bridle trails, bathhouse, comfort stations, food, boat rental and riding stable facilities. Parking for 1100 automobiles will also be provided.

For further information on Marsh Creek State Park contact: Park Superintendent, Marsh Creek State Park, R.D.#2, Downingtown, Pa. 19335.



*The unidentified fisherman above adds another fish to his stringer while fishing the west side of the lake.
Inset shows bass fry which were planted during June, 1974; some were legal in fall of 1975!
The Lyndell, or west boat launching facility is open 24 hours a day; east launch area closes at dark.*





Summer smorgasbord for Pennsylvania trout:

Terrestrials— Times & Tactics

by John Crowe

illustrated by John D. Voytko



Terrestrials! What are they? Nothing new. You have known them by other names ever since you began to fish for trout. But “*terrestrials*” is a new and popular word in the lingo of trout fishermen. It’s simply a technical-sounding term for earthworms, grasshoppers, beetles, grubs, caterpillars, or any other trout food or insects originating elsewhere than in the water.

For some reason, worms, grasshoppers, beetles, and other such items of trout fare — terrestrials, that is — have long been upstaged by mayflies, stone flies, caddis flies, and the like, the trout stream insects of tradition and literature. Should I call them aquatics? It’s as logical a term as terrestrials, even if you’ve never heard it before.

Why some people hold in contempt the catching of a trout on anything but a “fly” has always puzzled me. It must be some sort of a caste system, with the “dry fly” fishermen highest, Brahmins as it were. Next come the “wet fly” men, ranking over such lower castes as the users of streamers, artificial grasshoppers, beetles, and the like. At the bottom of the system are those fishermen who use natural minnows, caterpillars, and — oh horrors! — **worms!** They are “*outcastes!*” They are also, quite regularly, catchers of the biggest fish.

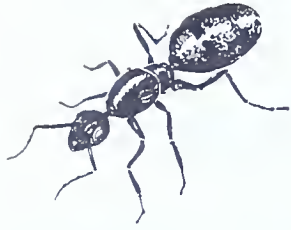
Izaak Walton, perhaps the most famous fisherman who ever lived, with the possible exception of St. Peter, was high on worms, particularly the common earthworm. He never apologized for its use, and he recommended it in these words: “. . . *especially . . . for a great Trout . . .*”

As far as I can recall, Walton did not use the word “terrestrial,” but he gave much space to the idea “of the earth” which it represents. With such a prestigious example, why does anyone hesitate to use a terrestrial or apologize for using it? But a prejudice exists.

Last year, one lazy late summer day at Fisherman’s Paradise, it was hot, windless, enervating. In tune with the weather, the trout were lazy, too, responding reluctantly to offerings of fishermen along the banks.

More because of the shade than for any other reason, I was working the water under the first big willow along the west bank just below the footbridge. Hampered by overhanging branches, my casts were short, not more than 15 or 20 feet out to relatively shallow slides, hardly the kind of place for a big fish.

Then, all at once, without any skill on my part, I hooked the best trout I ever engaged at Fisherman’s Paradise. A few minutes later, in the long pool below, I disengaged the No. 12 black



Like 'em light? Try an ant . . .

deer hair beetle. The big trout lay on its side for a moment or two before righting itself to move slowly away into deep water.

The catch was a lucky one; I'm telling of it only because of a conversation following. As soon as I let the big trout go, a man who had been watching came down the honeysuckle covered bank.

"Nice fish," he said. "Do you mind if I look at the fly?"

Of course I didn't mind. In fact, I gave him the bedraggled beetle, plus a couple of new ones. He looked doubtful.

"Are these legal in here?" he asked. "I thought this place was restricted to fly fishing."

Looking at illustrations in the catalog of a well-known supplier of trout "flies," I find the following distribution: About 125 so-called trout stream insects, or conventional flies; about 20 streamers, imitations of minnows; but, **only eight terrestrials!**

In my opinion this is disproportionate, not only for trout fishing in the United States generally, but for trout fishing in Pennsylvania in particular. The man so bound by tradition — or prejudice — that he feels only the fishing of conventional flies is ethical, is missing a lot of fun. And missing it for no good reason.

Let me tell one more story. Again it was late summer, August, shortly before Labor Day. The late Bill McNay, longtime Bedford County Waterways Patrolman, had recommended to me a meadow stretch of Yellow Creek as "good for grasshoppers at this time of year."

It was good. I had used up two or three artificial grasshoppers when

about four or four-thirty I came up to a man I knew, sitting on the bank.

"I'm waiting for the evening rise," he explained.

When I remarked that the fish had been good with grasshoppers even since midmorning, he was patronizing.

"You know I never fish with anything but flies."

If someone has been so conditioned by the traditions, literature, and catalogs of trout fishing and is happy with his condition, let him be. But in these days, he is missing some fun. And the late season fisherman who spends time "waiting for the evening rise" is wasting time . . . time astream, too valuable to be wasted.

About *time* of season: I agree that the aquatic insect hatches of late April, May, and June provide spectacular opportunities for sport; that identifying stream-emerging insects and attempting to match them is a fascinating pastime in itself. So much so that for many fishermen the latter part of the season is dull. Hatches become erratic; they are short-lived; and if they occur at all, it is usually in late evening, at night, or in early morning. At such times, taking advantage of them involves discomforts like night driving or pre-dawn getting out of bed — *trials*, indeed, for a lazy fisherman like me!

In July and August the terrestrials come into their own. In 1975 the Fish Commission extended the season (on approved waters) to the end of October, providing almost two additional months, wonderful months, of stream trout fishing, especially with terrestrials like grasshoppers, beetles and caterpillars.

The occurrence of terrestrials is not confined to the latter part of the season; for example, the earthworm, the all-time favorite trout bait in Pennsylvania. However, there are objections to worms in some waters, and they become increasingly difficult to fish as the season progresses and water levels drop. Besides, an artificial worm is hard to tie and awkward to fish. It is almost altogether unsuited to fishing on the surface.

Another early season terrestrial is the June bug, or beetle, in both the adult and larval forms. The grub is a fine natural bait, but it is not so easily come by as the earthworm. Also, like the earthworm, an artificial is a lot of trouble to tie and fish. The adult, the

familiar brown beetle, offers greater possibilities. As a rule the naturals aren't easy to collect in adequate numbers, but they are effective, though less so than the grubs. Artificial June bugs are easily made of deer hair, although they are a bit clumsy to cast. Yet some knowing fishermen use them with great success, particularly at night.

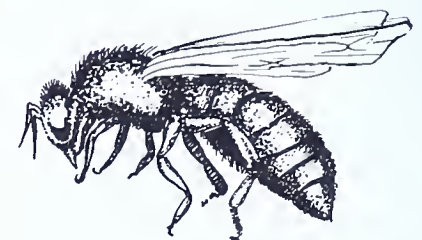
Which brings us to time of day: For all the latter part of the season, say from July onward, terrestrials fish best at the time of day most convenient to be astream . . . late morning, noon, and afternoon. Maybe that's why I enjoy fishing them; as I said, I am a lazy fisherman, disliking the early rising and late driving involved in conventional "fly" fishing.

The smaller terrestrials, the grasshoppers, beetles, inchworms, suited to late season use, are easy to cast — at least in their artificial forms. They do not come to the water with the lightness of a mayfly, but they aren't supposed to. A grasshopper wind-blown to a meadow stream hits the water with some impact; so does a maple worm in a woodland stream. Even the small and now ubiquitous Japanese beetle dimples the surface perceptibly.

If you must be more conventional than to use such artificials as the above, if your offering must come to the water like thistledown, try imitation ants, two-winged flies, honeybees, or the like. These are terrestrials . . . terrestrials approved even by strict conventional "fly" fishermen. Personally, for late season work I have much less faith in them than in the less conventional, heavier-bodied ones.

Perhaps I should mention spiders. Although they are not insects, they are

. . . or try a plain old bee.





On a late season trout "hunt" it's great to both watch and catch them.

terrestrials. Most imitation spiders have little or no resemblance to natural spiders, but they do cast lightly — if that is important. Spiders are not naturally attractive to trout, for some reason. I have rarely found one in a trout stomach, and I do not recall ever seeing a trout rise to one running across the water surface.

Finally, the *tactics* of fishing terrestrials, especially the artificials: Fishing the so-called spiders is little different from fishing any conventional fly. The same is true of ants tied in the usual way, of two-winged flies, bees, and such forms. It is in the fishing of the heavier-bodied terrestrials that the fisherman will improve his chances by making some adjustments to the peculiarities of each type.

First and most important, when fishing either artificial or natural terrestrials (or anything else), make yourself as inconspicuous as possible. Whether achieved by casting long and delicately, moving very slowly, or using available cover, inconspicuousness is a prime requisite in successful trout fishing. I've said that so many times that I'm sure someone will accuse me of repetitiveness, but I'll say it again. It is more important than correct pat-

tern, casting ability, quality of tackle, or anything else in fishing for trout in a natural environment. It is doubly important in late season work.

Second, try to duplicate the *where* and *what* of the trouts' natural feeding. If the trout are lurking under streamside bushes or trees waiting for hapless Japanese beetles, inchworms, or maple worms to fall into the water, devote your attention to such locations, using an imitation approximating in size what they are taking. Size is the most important factor in late season — size and shape. Exact imitation in such matters (as right number of legs) may be helpful, but such details are much overrated as contributing to success.

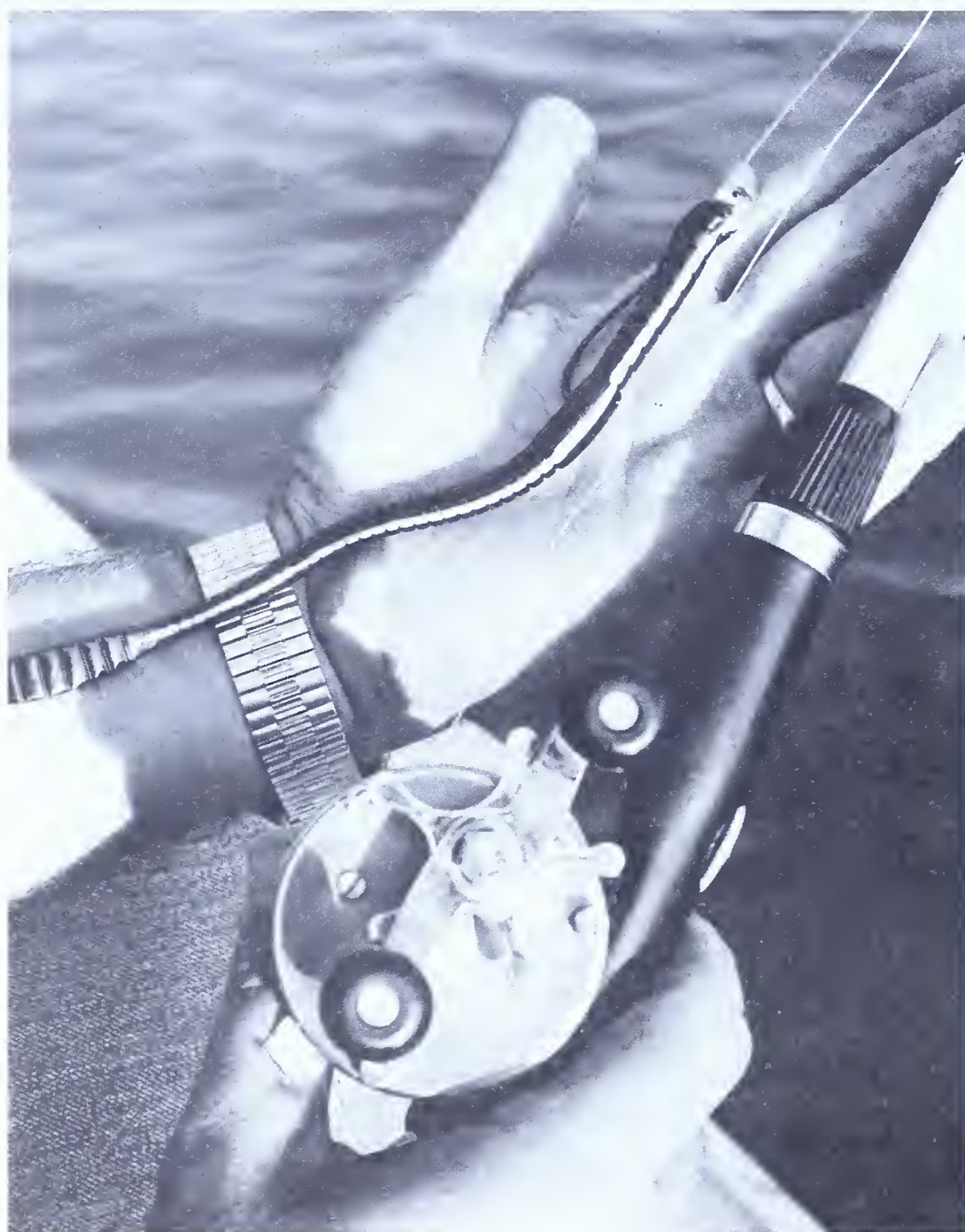
If I seem to neglect the matter of color, the neglect is intentional. I have never been able to figure out why, for example, a black beetle works better than one of any other color. If trout are taking willow beetles, which are not black, still the black artificial seems the best taker.

Third, do not be overconcerned with casting accuracy. In a heavy hatch of may flies, a trout can gorge itself by lying under a drift line, taking only what comes over it, perhaps not mov-

ing more than inches in its steady feeding. But in its later season feeding on terrestrials, that trout will be hunting, sometimes over an entire pool. It will move five, 10, or 15 feet to take, attracted as much by the disturbance of the insect's falling on the water surface as by the sight of the insect itself. Extremely accurate, delicate casting is not a concern; getting the offering to the water without scaring the trout is what matters.

It is always dangerous to generalize about such a complicated sport as trout fishing, but I'll do it by saying this: the successful fisherman with conventional flies in the earlier part of the Pennsylvania season directs his attention to the main flows of the stream. On the contrary in the later season, the successful fisherman with terrestrials directs his to the margins, the backwaters, the tails and shallows as well as, perhaps, the midstream.

And maybe that's one reason that late season fishing with terrestrials is such good sport. You can watch the ranging trout, working away from their secure deepwater lies. They will come to your offering — even when your offering does not come very close to them.



Worms, Cranks and Blades

by Nick Sisley

During the last decade, bass fishing, especially *successful* bass fishing, has become an extremely sophisticated sport. The use of flashing depth finders, recording graph depth finders, oxygen/temperature monitors, modern bass boats that are genuine "fishing machines," and innovations in reels, rods, lines and lures, have permitted today's most knowledgeable basser to surpass the so-

phistication of any of yesteryear's expert anglers.

Everyone that goes fishing for largemouth bass can't afford each new piece of bassing equipment that comes along. However, three new types of lures have emerged during this ten year period, and they are withstanding the tests of time. Most of us can afford a few new lures. These three lure types have, in many instances, proved more

productive than any of the lure types that preceded them. Each of the triad requires some new fishing techniques.

In cool waters, it pays to fish spinner baits very slowly, tumbling them over the bottom with only slight turning of the blade. As waters warm, it pays to fish these lures a little faster. When fish are in shallow, warm waters, many bass experts will "buzz" their spinner baits. By turning a high speed retrieve reel as fast as possible, one can move a spinner bait so fast that the blade is partially out of the water. This really stirs up the surface. Strikes under these conditions are vicious - and exciting.

SUMMARY

The proper use of these three lure types can mean more successful bass angling to you. The tyro must be willing to change some of his preconceived notions about bass fishing - like be willing to cast into snag infested places and resist the temptation to jerk the lure if it appears snagged. Finally, he must be willing to learn all there is to know about three of the newest but most effective bass lure types - **WORMS, CRANKS N' BLADES!!**

The three lure types I speak of are plastic worms, crank baits, and spinner baits. In the vernacular of the dedicated basser, they are more often called "Worms, Cranks & Blades." In the last few years I've been able to do a lot of bassing south of the Mason Dixon Line, usually in the company of a local bass expert. All of the experienced bassing men I've met in the south carried tackle boxes holding a wide variety of each of these three lure types. Most Southerners know how to fish them, too. However, I seldom see these lure types in evidence here in the Keystone State. When I have seen them, anglers were not usually fishing them in the most effective manner. I have personally used all three in several of our bass lakes and know they work here. I am convinced that if more Pennsylvania anglers learn how to use these three lure types, they will encounter more fun and action when bass fishing.

PLASTIC WORMS

The way *not to catch bass* in Pennsylvania with plastic worms is to use them like you are accustomed to fishing any other type of lure. The

primary value a plastic worm has is that it can be rigged weedless and snagless, and can thus be thrown into places where one would never consider casting any other type of lure. When using natural bait or any other type of lure, most Pennsylvania anglers are "snag-shy." Past experience of getting snagged has made them reluctant to cast into any spot unless they feel certain they will get their bait or lure back. For the plastic worm fisherman to be successful, he must be willing to forget this snag fear philosophy completely.

Largemouth bass spend almost all of their time in areas that are snag-infested. These spots may be among rocks, under or at the side of fallen logs or stumps, in submerged treetops, in bushes growing in lake shallows, along drop offs, weeds, etc. The plastic worm fisherman must be willing to cast right into such places and have the confidence and know-how to retrieve his lure.

Knowing how to rig a worm in a weedless manner, usually called "Texas Rigging," is paramount to success. Thread a torpedo-type sliding sinker on the monofilament, then tie on a worm hook. These are special hooks, and have varying configurations. Go to your local sporting goods store or check catalogs for this item. I suggest you try several different styles and judge for yourself which one you like best. Try sizes 3/0 and 4/0 to begin with. The point of the hook is threaded right through the top of the worm, bringing the hook point out approximately one-half inch below where it was originally inserted. Now push the worm around the bend of the hook and up the shank — right to the eye. Next rotate the hook 180° so that the point is turned back toward the worm. Insert the hook point back into the plastic worm material so that the worm hangs straight and natural — otherwise this bait will twist and cause line problems as you retrieve. *Do not push the hook point all the way through the plastic worm.*

Setting a hook when using a plastic worm is difficult. During the retrieve, experts hold the rod tip in an elevated position, so it is not advisable to set the hook as soon as one feels the strike. One reason for the elevated position is to provide a little bit of slack by lowering the rod tip when one

feels a strike. This gives the bass a brief half-second to inhale the worm and get the hook into his mouth. The angler will hook more fish if there is a little slack in the line when he does set the hook. I know it sounds unreasonable, but it is true. When a strike is felt the rod tip is lowered and most of the slack is taken up with the reel handle, but not all of it. That's when the hook must be set. And, in plastic worm fishing one has to come back like gangbusters! The reason for setting a hook so hard is that you have to first force the hook point *through* the plastic worm and then into the bass's jaw. I prefer rods with plenty of backbone in the butt section. The average spinning rod, with its soft action, will fail miserably in hooking bass that have taken Texas-rigged plastic worms. Also, most bassers prefer 14, 17, or even 20-pound test . . . most Pennsylvania anglers I know use 6, 8, and 10-pound line. The reasons sophisticated bassers prefer heavier line are: (1) it stretches less when the hook is set, and (2) when casting into the worst possible places, the fishing line can't help but become abraded as it strikes against logs, rocks, and branches. A nick in 20-pound test isn't nearly as critical as that same nick in 6-pound mono.

There are a couple of other reasons why plastic worms catch bass — in addition to the fact that they can be rigged weedless and snagless and can thus be cast and worked through the "awfuls" where the bass spends most of his time. One of them is that a plastic worm looks like a tasty morsel that Mr. LMB would love to devour. Also, most plastic worms are scented these days, and it's a known scientific fact that bass can detect scent very well. It is a factor in their feeding habits.

I prefer seven-and-a-half-inch worms for most bassing situations. In extremely clear water or other special circumstances, a six-inch worm might be more in order. Also, I tend to use dark colored worms more often than any others. They seem to have more "contrast" with the water. To me this means that these dark colors are easier for the bass to see in most water clarity situations. My preferred colors are black, purple, red, and blue — usually in that order.

As you cast, keep checking your

plastic worm to make sure that the hook point hasn't come through the plastic body of the worm. If it has, fix it. Also, the top of the worm, the portion that is up near the eye of the hook, sometimes slides back down the hook shank. Always make sure it is up at the eye before the cast. Some bassers alleviate this problem by inserting the end of a toothpick through both the top of the plastic worm and the eye of the hook, then cutting the toothpick off flush with a pair of side cutters. The important consideration is to discard the worm if it becomes torn or the hook point comes through the plastic too easily. Otherwise you are sure to get snagged. Discard the worm before you do.

Finally, the question of when to set the hook has always been a controversial subject in plastic worm fishing. My advice is set the hook as soon as you can, but not immediately. Work the lure across the bottom or through structure with the rod tip elevated. Lower the rod tip as soon as you feel a bass tapping your offering. I crank in most of the slack as the rod tip is coming down, then sort of "feel" to make sure the fish is still there. If he is, "cross his eyes," as the vernacular goes.

CRANK BAITS

Crank baits made their appearance on the fishing scene a few years after the advent of plastic worms. These are plugs made of balsa or plastic, but unlike their plug predecessors, these minnow imitations have a fat body. They were developed to imitate threadfin and gizzard shad which abound in many of the great bass reservoirs of the south, but many shad also exist in good numbers here in Pennsylvania waters.

The original crank bait was called the Big O. It came out first in a fairly large size, but I've never had any success with this type of crank bait. My successful experiences with crank baits have been with the smaller sizes, like $\frac{3}{8}$ or $\frac{1}{4}$ ounce. I believe that crank baits, with their fat bodies, also imitate small bluegills, a fish that Pennsylvania bass feed on regularly. Crank baits can be acquired in shad colors, bluegill colors and virtually every other color of the rainbow. In clear waters I prefer the natural shades of shad or bluegill; but, as bass water be-

Largemouth bass are highly vulnerable to the author's choice of lures.

comes dingy, I like to switch over to the bright attractive reds, chartreuses, oranges, etc.

Different brands of crank baits run at different depths. Some of them are designed for running three- to five-feet deep, while others, if the retrieve is a long one and the reel handle is cranked fast enough, can sometimes reach 12- to 15-foot depths. With these lures, anglers have the latitude of being able to change to different types of crank baits when different water depths and different bass habitat conditions are encountered.

Casting accuracy is still important, and the Pennsylvania basser who wants to improve his catch must be willing to cast into brushy areas. Here the level-wind baitcasting reel comes into its own. With experience and an educated thumb, pinpoint accuracy can become second nature. It is even possible to throw these crank baits, usually adorned with two treble hooks, into brush, semi-submerged treetops, across logs, etc. When an inexperienced basser finds his lure sitting in such a precarious position, among the "awfuls," his natural reaction is to jerk to try and get it out of there as fast as possible. But the experienced bass angler tries to move his lure very slowly under these circumstances. By doing so, he not only makes the bait look ever so enticing to a bass that might be watching, he also stands a much better chance of getting his lure back. With a bass boat rigged with an electric troller, the experienced basser gets back those few lures that do hang up. The tip here is, *ease* that lure out of bad places . . . don't try to *jerk* it out.

Four different types of retrieves can be used effectively. The normal retrieve is a steady one, varying from slow to extremely fast. Usually, the slower the retrieve, the closer to the surface these lures will run. Crank baits can also work well as top water lures. Cast them into a likely looking bass lair, let them sit for a moment, then twitch the crank bait, stopping it intermittently as you ease the lure enticingly back toward you. A third and also extremely effective retrieve is to crank the lure down to its normal depth, then stop the reel handle and let

the lure bob slowly back to the surface. Finally, many bassers have found, especially in cool waters, that lunkers are not willing to strike a fast moving lure, yet the fish might be in depths of eight feet or more. In these situations, begin with an extremely fast retrieve, which gets the bait to the desired depths quickly. Then slow it down. Most crank baits will then remain at that depth as they head back toward the boat.

Crank baits are usually excellent lure choices when working a steep

bank edge. They tend to stay right along the contour of such places.

All crank baits with which I am familiar *float*. If you encounter resistance in the form of branches, rocks, stumps, whatever (just so long as it is not a fish), merely stop turning the reel handle. Lower the rod tip to give a little slack, and you'll find that in many cases, crank baits will free themselves and float back towards the surface. The reason for this is that the plastic or metal "lip" usually touches the snag first — not the trebles.





A spinner bait proved to be the end of the line for this fine bass.

When you take a crank bait out of the box, it has usually been "tuned" by the manufacturer. By that I mean the crank bait runs straight and true in the water. However, if you get these lures snagged up and do a lot of tugging or hang one or more big bass, they sometimes tend to run off to one side. This fault can usually be corrected by turning the eyelet slightly (where the mono or swivel snap is attached). Sometimes a bent treble hook must be replaced to get a crank bait to run straight and true.

BLADES

Spinner baits became popular about the same time as crank baits. They are also an extremely effective bass lure. Actually they combine the effectiveness of two of the most deadly fishing baits of all time — the jig and the spinner.

Spinner baits come in a vast array of sizes and colors. Pennsylvania anglers will probably find that $\frac{1}{4}$ and $\frac{3}{8}$ ounce size spinner baits are the most effective in our waters. I have dis-

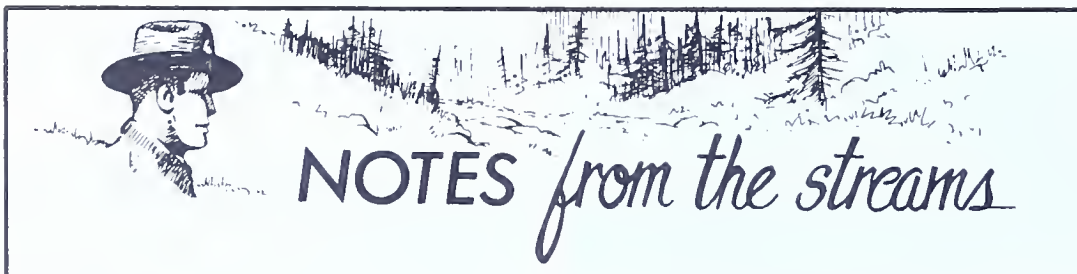
covered that these lures produce best for me when bass are foraging, resting, or hiding in fairly shallow waters. However, I know that some bass experts specialize in this lure, fishing it virtually year-round in the Deep South. They can catch fish in deep water with spinner baits, but I've never mastered the required technique.

Chartreuse is my favorite spinner bait color. Normally I opt for gold blades; however, most spinner baits come equipped with chrome or silver colored blades. Consequently, gold blades are not nearly as easy to find in tackle shops. Blades can be painted, so it is possible to acquire them in many shades. Yellow is another of my favorite spinner bait colors.

A spinner bait consists of a hook, with lead molded (in various shapes) near the eye, affixed to a piece of wire shaped in a "V," which is twisted circularly at the vertex with one or more spinner blades affixed at the other end of the "V." A rubber or plastic "skirt" is usually affixed just behind the lead head portion. Sometimes a plastic grub is used instead. On retrieve, it comes through the water with the spinner blades above the lead jig and hook portion with the hook turned up. This lure type is also quite snag free. Some of them even utilize polyethylene weed guards for added snag protection. Bassers must be willing to throw spinner baits into the brushy places, as I have recommended for plastic worms and crank baits.

The spinner bait blade size and shape determines the amount of vibrations sent out, and these vibrations do attract fish, as does the flash of the spinner. The bass's lateral line is extremely sensitive to water movement, and they can detect spinner vibrations from a long distance even though they might not be overly anxious to charge in and strike every time they feel this sensation. However, it does occasionally arouse their attention!

The lead head portion of the spinner bait gets the lure to the bottom, which is usually where the bass are. The fluttering rubber or plastic skirt, or grub, is often all that is needed to entice a strike once the fish is lured in close by the spinner flash and vibration.



TRIPLETS!

There is no question the Department of Revenue does a terrific job in handling over 100,000 boat registrations per year. Sometimes they make a small boo-boo like only sending one validation decal instead of two. This happened to a local fellow named Roy Ferry of Aliquippa last year and he appealed to me for help. I recently saw Mr. Ferry at fish stocking and recalled what had happened last year. This year they evened up and sent him three decals!

*Don Parrish
Waterways Patrolman
Beaver County*

WHO COUNTS?

While talking to the administrator of one of Luzerne County's private schools about setting up our Basic Boating Course at that institution, she informed us that *all the students* from grades 8 through 12 would attend, making a grand total of fourteen persons attending the course. When Officer Messerle remarked that we had hoped for a greater number . . . we generally like to have at least 16 people for the class. She replied, "Okay, I can give you the seventh graders also and that will make 16." IT WAS A NICE CLASS!

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

POOR LOSER!

While on routine patrol of closed trout streams in the Allentown area a couple of weeks before the opening day, I noticed a young man fishing in Jordan Creek.

A "Fishing Prohibited" sign was prominently displayed near his fishing spot, so I wondered what the excuse could be this time. Approaching this angler, I asked if he knew that the streams were closed and if he had his fishing license with him.

He stated that since he did not fare so well with his fishing endeavors during 1975 there was no sense in wasting his money by purchasing a license for 1976!

He was advised that there was a penalty involved for fishing without a license; there was also a penalty for fish-

ing in a closed stream; and, yet another penalty for possession of that brown trout he had on a stringer!

Upon hearing of these violations, he gripped his rod tighter and tighter and became redder and redder. Finally, he lost control and bent his rod completely around until it broke in half. Then, not being satisfied, he broke it in two more pieces, threw his reel on the ground, and jumped and stomped on it.

After all this commotion, he seemed to calm down a little. I managed to obtain identification from him from some card he had in his wallet. He stated that he did not have a driver's license for identification because he didn't drive.

Summoned before a district magistrate, I learned this man had quite a record of arrests for a variety of offenses before I apprehended him.

*Robert E. Stuffle
Deputy Waterways Patrolman
Lehigh County*

TALL TALES

We who hunt and fish for a recreational pastime in competition with no one, often witness unusual incidents while we are along the lakes and streams. These incidents are told at all sorts of gatherings where groups of anglers gather. One might add that these incidents are always the "gospel truth."

This incident that I will pass on was related to me by a group of six musky anglers from York, Pennsylvania. Their names are Pete Fleming, Bob Zeigler, Whitie Minnick, Bob Kriner, Ted Thornton and Dick Smith.

It all started on a very dark and windy, eerie January evening when our group of six anglers were along the Susquehanna River musky fishing at an area known by anglers as the "Warm Water." They had several lanterns set up so that they could see to change lures, eat sandwiches and drink coffee.

Well, the group had been fishing for several hours when they saw a musky rapidly heading for shore. That they "saw" him is explained easily by the fact that the musky was skimming *over the surface of the river*. The musky came to rest (apparently after crashing) next to the lantern. Several minutes passed and, after it has been measured and released, our anglers returned to their fishing.

"CRASH, BANG" — Low and behold another musky is flopping on shore near a lantern.

The two muskies measure 35- and 36-inches in length. Oh, don't leave yet fellow anglers, we are just getting to the good part. Our six anglers returned to fishing, talking about the best plugs for muskies at night and WHAMO, another vicious hit . . . on another lantern. Well, at least this musky was getting near bragging size — 38-inches! But before our group could get back to plugging, two muskies zipped across the river surface and crashed into the remaining lanterns. Just for the record, one was 40- and the other 42-inches.

The score for the evening turned out to be: anglers — 6; lanterns — 5. Fellows, that musta been some coffee! (Or, maybe they would let us know what type of lantern they were using!)

*Warren W. Singer, Jr.
Waterways Patrolman
N/ York County*

DEDICATED—

While working with Waterways Patrolman Hartle on the Lower Susquehanna, it was most obvious that Lake Clark at Long Level is indeed one of the major boating pools in the state. Boats of all sizes and description were engaged in all manner of water-related outdoor recreational activities.

The Fish Commission patrol boat, fully equipped and ably manned by Security Officers Moore and Baker, was also most active, rendering assistance to a stranded boater approximately two miles from home port. A tip of the hat to a splendid, dedicated team of Field Officers in York County.

*Richard Owens
Supervisor
Southcentral Region*

EVERYBODY, MR.?

Recently, Deputy Mike Simmons was conducting the question-answer portion of a "Trout Fishing" assembly program in a local elementary school. He was asked about the age requirements regarding fishing licenses. When Deputy Simmons informed the students that they did not need to purchase a fishing license until they reached the age of 16 years, everyone seemed satisfied — or so he thought.

At the conclusion of the program, one shy little 11-year-old girl quietly pulled Deputy Simmons aside and asked if it were true that *all people* over 16 years of age needed a fishing license. Deputy Simmons confidently answered that they

did, only to have the concerned young girl respond, "Even if they don't fish?"

*Norman E. Ely
Waterways Patrolman
N/Erie County*

SOMETIMES IT DOES!

This story was relayed to me by one of our fishermen. As he was fishing the Tulpehocken Creek on the opening day of trout season, he saw a young man about seven-years-old carrying a fish along the bank with the intentions of bragging to his dad. When he got to his dad, his dad asked him if he caught the fish and the boy said he did. He held up a young robust carp. His dad congratulated him on catching a real nice brown trout. Does it really matter?

*P. T. Hornberger
Waterways Patrolman
Lebanon County*

NATURAL WAY -

Last summer while on a patrol of Mud Run, Deputy Stanley Warner and I decided that he would check upstream and I would check downstream. Before starting downstream I picked a few fern leaves and installed them in my cap to ward off the numerous flying insects that

were present that day. Upon returning to the starting point I observed Officer Warner checking a fisherman who was in the process of spraying himself with bug repellent. I approached and told him he could leave his spray at home if he adorned his cap with fern leaves, nature's repellent. I had scarcely finished when Officer Warner spoke up and declared that he could believe me if he wanted, but the real reason the bugs didn't bother me was because they thought I was a bush.

*Robert Kenvin
Special Waterways Patrolman
S/Luzerne County*

"HIC"!

I received a very late — or a very *early* — call the other evening — or morning — whichever way you might want to describe it, from two loud gentlemen who seemed to be speaking from the same bar stool, judging from the background noises. It was during the 1976 pre-season trout stocking period and I had, only a few days before, released the county stocking figures which included an increase over the previous year. These two sportsmen wanted to know what the big idea was by putting more trout in our county's water.

I did not quite understand this question and replied that most of the other fishermen are delighted at the increase. The two then replied, almost in incoherent harmony that most of the other fishermen in the county do not know how to catch fish and with the increase, they know they will have their limits in a short time, which takes all of the sport out of it. Before I hung up I suggested, among a few other things, that perhaps these fellows ought to try ultralight tackle, using a bare, barbless hook. Before I heard the other phone go down I heard, "Thash shounds like a good idear!"

*Claude M. Neifert
Waterways Patrolman
Luzerne County*

NO "BITS"!

Recently one of my deputy officers suggested that I request some dictionaries to hand out among some of the anglers in our county. The reason? He saw the following sign carved into the bark of a large beech tree along one of our more popular streams: "Went home Joe, no bits."

*Gary E. Deiger
Waterways Patrolman
Greene County*

THE ANGLER'S NOTEBOOK by Richard F. Williamson

FISH FACT: Smaller varieties of panfish feed almost entirely on insects; and, since so many bugs are required to satisfy their appetites, panfish feed almost continuously. Larger panfish have a preference for small minnows.

Water is an extremely sensitive transmitter of vibrations. Therefore, boots scraping on the bottom, or a fish line, lure or bait alighting on the surface of the water can be detected by a fish a long way from the spot of the disturbance.

A sinking fly line or a floating line with a sinking tip is a big advantage in fishing stream currents. The sinking line gets the lure down in the water into areas where larger fish usually feed. Often a sinking line will operate so efficiently that not even a small split shot is needed to sink the lure.

A big rock in a swift run provides two very worthwhile fishing areas for the stream trout angler. Pockets of comparatively still water form both upstream and

downstream in the immediate area of the rock. This quiet water provides an ideal resting place from which trout can dart out into the current to feed.

Try fishing a small spinner across current and slightly upstream. The lure will tumble in the current, and the flash of the blade will attract fish.

Hooks in size 12 are good in fishing for bluegills. These fish have very small mouths.

Casting a long line is pretty, but the longer the cast the harder it is to hook a fish taking a fly. It is seldom necessary to cast a fly farther than 30 or 40 feet. Accuracy in placing the fly is more important than distance.

Weighted streamers, which invariably are hard to cast delicately, are not always necessary. Since minnows make their way about in different depths of water, streamers (which imitate minnows) also may be fished at various depths.

Turn to small feeder brooks when summer heat makes fishing tough on the larger creeks. Water in these brooks is shaded and cooler than in the larger streams, and often trout of surprising size will work their way into the feeders during the hottest period of the fishing season.

Alert ears and sensitive fingers are necessary in night-fishing for trout or bass. The angler is unable to see the strike of the fish, but he can hear or feel it in plenty of time to set the hook.

An angler wearing waders — or one who does not mind getting wet and travels in trousers and shoes — can have a lot of sport wading a large creek or river in the summer. He can explore the bigger water much as the small stream angler probes brook pools and riffles.

Aquatic insect hatches taper off as the trout season progresses. But trout still feed on insects — terrestrials such as ants, grasshoppers, and beetles — and imitations of these insects will take fish.



For Wives Only

by Paula Ford Cameron

Having been a "fisherperson" since I was six, I'm always surprised to realize how many women have never even tried the sport. My father and mother are both fishers and, of course, I married one.

One day last spring, for example, I overheard two ladies in the laundromat

bemoaning the approach of trout season. One said it was hard to believe "IT" would be here in another month!

"It seems like you just get over the ice fishing thing, turn around twice, and he's going out the door with a fly rod in his hands. Really, Alice, it's all I can do to keep from poisoning his eggs at that hour of the morning!"

Alice, a kindly soul if I ever eavesdropped on one, sympathized to the hilt.

"I know just what you mean. First it's trout, then bass and walleye, then our family trip to the shore for deep-sea fishing which leaves me with the kids, the sand, and now this shark business. Then it's the fall trip to Canada and first thing you know there's ice on the lake again. If it weren't for the football playoffs I'm sure the kids would forget who Jack is."

The conversation went on like this for several minutes. From the way Alice and her friend sighed, I didn't dare tell them that I actually look forward to fishing season. They might have thrown their laundry baskets at me.

I'm not a fishing widow; I'm a fishing wife! I suggest that every woman who has ever considered hiding her husband's fishing license buy one for herself instead.

Now don't go screaming about smelly, slimy worms. Aren't you the same lady who mixes her meatloaf with her bare hands? And besides, if jewelry doesn't bother you, lures shouldn't either.

And don't tell me you could never take a squirming fish off the hook. Who bathed your children when they were toddlers? As for cleaning a fish, it's really no worse than finishing the job on a Thanksgiving turkey.

If you think you could never kill a poor helpless little fish, don't worry. I often play a game of tug-o-war with a little fellow. Unlike hunting, fishing offers you a choice. Once a deer is dead, it's dead; but, if a fish is too small, or you're just not hungry for fish (like after five days of catching the limit), you can let him go with no ill effects. Just don't try to be his friend and let him go if he's hurt. A swallowed hook is no fun—even if your brain is the size of a pea.

Fishing is not a violent sport. It's peaceful and quiet. What do you think your husband has seen in it for all these years? Put on a pair of jeans, a teeshirt and jacket, and sneakers and you're ready to find out. Don't forget a life preserver if you're going in a boat, even if you do have a gold medal in freestyle swimming.

Ladies, don't knock it till you've tried it. Fishing is great. The best part is when you're alone in the deep woods with your husband, the water is gently lapping at the shore, the sky is clear blue, the scent of wildflowers fills the air, you have a stringer of beauties, and the babysitter doesn't expect you home for another two hours.

COMING UP: Lake Erie Fishing Tournament

The largest fishing tournament ever held in Pennsylvania will take place in Erie County beginning at daylight, September 17th, and concluding at 2:00 p.m. on the 26th.

Sponsored by the Chamber of Commerce Tourist and Convention Bureau, the tournament boasts prizes totaling \$45,000. A registration fee of \$5.00 is required of each entrant.

Tournament headquarters during the ten days of fishing will be held at the Erie County Fieldhouse with special entertainment held there nightly.

AWARDS SCHEDULE ERIE COUNTY (PA.) FISHING TOURNAMENT (CATCH AWARDS)

\$10,000 Tagged Mystery Fish.
\$10,000 100 fish tagged \$100 each.
\$ 5,000 25 fish tagged \$200 each.
\$ 5,000 100 fish tagged \$50 each
\$ 5,000 \$500 for the longest fish caught in each of the following ten species:

Smallmouth bass, largemouth bass, coho salmon, chinook salmon, channel cat, perch, walleye, northern pike, musky and crappie. (In case of a tie, the heaviest fish will be the winner. The prize-winning fish will be mounted, kept by the tournament sponsor for display all year, and returned to the winners at next year's tournament.

(DRAWING AWARD)

\$8,500 MFG 17-foot Royal Caprice, fully rigged with 120 HP I/O and Boyer trailer.

(INCENTIVE AWARD*)

*for early entrants only

\$1,500 14-foot Alumacraft Boat with 9.9 HP Evinrude Outboard and Holsclaw trailer.

GRAND TOTAL PRIZES: \$45,000

The "Mystery Fish" is just what the name implies. Only five people will even know the species tagged and if the fish is caught during the ten-day tournament by an angler registered in the tournament, he's \$10,000 richer! Special regulations

will be in force to eliminate cheating. The "Mystery Fish" will be released in Presque Isle Bay waters.

Other tagged fish will be released in the bay as well as inland lakes of Erie County. Special considerations will be taken to insure that bank fishermen will have a good chance to catch an award winning fish.

Lake Pleasant, Lake Edinboro, Lake LeBeouf, Eaton Reservoir, and the Fairview Gravel Pit will each receive tagged fish. Fishing in these areas is always good, but now it can be profitable, too.

For complete information, registration forms, etc., write:

Bob Chandler, Tournament Director
ERIE COUNTY (PA.) FISHING TOURNAMENT
Tourist & Convention Bureau
c/o Chamber of Commerce
1006 State St., Erie, Pa. 16501
(TOURNAMENT INFORMATION NOT AVAILABLE FROM FISH COMMISSION OFFICES.)

NATIONAL SAFE BOATING WEEK

July 4 through July 10, 1976

by Alan MacKay
Marine Services Specialist

The fact that Safe Boating Week begins on the nation's 200th birthday might tempt one toward pontificating a bit, but the fact is, 200 years ago recreational boating didn't exist. So we won't!

Instead, let's take a look at the many voluntary organizations who work year-round to provide a multitude of boating courses, from the very basic for the beginner to the more complex for the experienced boatman who wishes to sharpen a particular skill.

RED CROSS SMALL CRAFT COURSES

Basic Rowing

Rowing and sculling, as well as safety and rescue, are taught in the Basic Rowing course.

Basic Canoeing

In the Basic Canoeing course you learn canoeing skills, safety, rescue, and selection and care of equipment.

Basic Sailing

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The Skipper's Outboard Special

The Coast Guard Auxiliary has another safe boating Public Education Course entitled "*The Skipper's Outboard Special*" (SOS). It is primarily intended to teach the basics of boating safety to the occasional and novice boatman. It is an excellent starter program.

The SOS is a one lesson course which provides an understanding of safety devices, boating equipment and potentially hazardous situations.

PENNSYLVANIA FISH COMMISSION'S BASIC BOATING COURSE

The Pennsylvania Fish Commission has developed a six-hour Basic Boating Course specifically tailored to the needs of Pennsylvania boaters. These courses, usually conducted in three two-hour sessions, are taught by the Commissions' District Waterways Patrolmen and are offered in every county in the Commonwealth. Special classes can be arranged for groups of fifteen or more.

For more information, write:
BOATING SAFETY, Box 1673, Harrisburg, PA 17120.

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(Bark)
11 1/2 feet—35 pounds



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17 feet—75 pounds



STANDARD CANOE
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17 feet—75 pounds



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(Bark)
36 feet—250 pounds



SLALOM CANOE—C-1
(Fiberglass)
13 feet—30 pounds



SLALOM CANOE—C-2
(Fiberglass)
15 feet—50 pounds



WILDWATER CANOE—C-1
(Fiberglass)
13 feet—32 pounds



WILDWATER CANOE—C-2
(Fiberglass)
15 feet—50 pounds



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(Fiberglass)
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13 feet—22 pounds



THE AMERICAN NATIONAL RED CROSS

This youngster is not only serving as a model, but is gaining valuable knowledge from an expert on how to be "water safe" at an early age.



Ashore & Afloat

by Gene Winters

I am sure there are days when even statisticians become frustrated, if not bored, with statistics. Given any set of figures it is usually possible to interpolate them in several directions, depending on the point of view you desire to highlight. Yet, as one whose livelihood has hinged upon attainment of "the numbers" (radio-TV surveys) for over twenty years, there is no escaping the fact that, like it or not, statistics are now a regular part of all our lives.

There are many ways to take numbers and express them *statistically*. They may be arranged methodically, as in a financial statement: neat and precise, right down to the "bottom line." Other presentations parade charts and graphs till our eyes grow weary. Or, far too infrequently, they may be dressed up in words and pic-

tures. The Pennsylvania Fish Commission's Annual Report, as depicted in the January 1976 *Angler*, presented all the numbers, not only tastefully but also interestingly and even entertainingly.

Referencing that Annual Report, it is noted there was an increase in boat registration during 1975 of slightly over 10,000 boats. For the purpose of this article, let's *assume* that during this year's boating season, each of these newly registered boats is skippered by two different operators. We then have, *potentially*, over 20,000 new operators at the helm. Let's assume further that during this same boating season, each newly registered boat carries a minimum of five different passengers. Children, grandparents, all the other relatives and friends

COURTESY BOAT EXAMINATION STATION



probably make this a very conservative number. We now have, again potentially, another 50,000 persons on the water with, if we may assume again, little or no boating experience. (Before you question what boating "experience" a *passenger* needs, remember how many casualties are riders who "fell overboard", etc.) If we may make one further assumption, let it be that an additional 30,000 operators/passengers have been on the water for more than a year who should not have been because of ineptness, lack of training, common sense, etc. While you may or may not agree with my hypothesis as presented, *it allows a potential of over 100,000 people on the water this season with little or no training, knowledge or experience!*

Returning to the figures in the Fish Commission's Annual Report . . . while the total number of *accidents* remained almost constant over the past two years in spite of increased registration, there was an increase in *fatalities* in 1975. Nearly . . . and pay close attention to this . . . nearly 60% of the boating fatalities in 1975 involved *nonpowered, unregistered craft, with canoes leading*

Safe boating education is available from a variety of sources: USCG Auxiliary, Red Cross, Fish Commission classroom and "on-site" instruction, and yet but a small percentage of the boating public is reached despite their combined efforts!

the field! Add to this the fact that 71% of the boats registered in 1975 were Class A boats (under 16' in length) and you know where the thrust of boating public education must be directed. Yet these persons, owners and operators of Class A boats, are the most difficult to get into the classroom or to a field session on boating safety. In this same group are the many anglers and hunters who utilize a boat but, over and over again, continue to insist **they are not boaters!**

One final reference to my "statistics" . . . my potential 100,000 untrained, inexperienced boaters . . . and you will see the work to be done in the boating education field. The Commission's Waterways Patrolmen conducted boating schools with a student enrollment of slightly over 1269 persons in 1975 (highly

laudable, considering all their other duties!) while an additional 1389 persons completed the course by correspondence. Here in our state, the Coast Guard Auxiliary reports teaching over 23,000 students in 1975, although this figure is inflated slightly by students attending classes in portions of New Jersey and Delaware. Power Squadron and American Red Cross boating student enrollment figures were not available at this writing, but I think it is safe to say that all of us, working toward a common goal, *reached only about 35% of my potential 100,000 persons who entered the boating world in Pennsylvania during 1975!*

Permit me to throw one final set of numbers at you. New statistics from the Coast Guard show, in a major nationwide change, that for the first time in years, 1975 saw more *fatalities* caused by *collision* than by *capsizing* in all but five of the inland states. There's a message in that statistic! Trade-offs are unacceptable . . . we need continual improvement in all classifications. Boating education courses are the best tool we currently have available. **May we sign you up?**

CO-OP NEWS

by Bill Porter

Carbon County's "JIM THORPE SPORTSMEN" get a well deserved notice this month. The club has been raising cooperative nursery trout since 1970, but the history of the project actually goes back to 1967 when a group of club members under the leadership of Howell "Jocko" Williams decided to develop a nursery and get involved. The Jim Thorpe Water Authority granted use of a site that included land with frontage on a stream and an artesian well.

The area was placed under observation and construction work began with completion of the project by July of 1969. Some of the prime movers in addition to Williams at this time were Geza Holczman, Melvin Fairchild, Vic Lukasevich, and Jake Richter. J. Edgar Smith, a local contractor, donated men and equipment for excavation of the road and the nursery.

Things seemed to be running smoothly for the men of the Jim Thorpe club and their new Mauch Chunk Creek Nursery. Then Agnes struck. The creek flooded and a washout caused the nursery to buckle and crack. In effect, it was necessary to start over—which they did.

"Jocko" Williams, club president and 72-years-young, saw his dream fulfilled with the arrival of the club's first trout.

The initial 2,000 brown trout were stocked the following year and the club had unusual success with them. Al Weiksner, then nursery manager, reported stocking 2126 trout after all losses. Yes, those are the correct figures and not a typing error. Apparently the initial 2,000 was a rough count. In any event, the boys put more than they technically received into local waters.

Currently, the club is handling about 3,500 trout with a reasonable number of holdovers. The latter are unfortunately attracting some of the two-legged predators. Our recent visit this year followed by just a few hours a rip-off of over 70 two- and three-year-old fish. This, done in spite of the chain link fencing and locked gates, created something less than a festive mood among the sportsmen who met us.

The nursery itself is 60 feet long with three 20 foot bins. As mentioned above, chain link fencing surrounds the cement-walled raceway with barbed wire over the top and strong chain-locked gates. The individual compartments are screen-covered and padlocked. Natural predators do not present a problem.

Water for the nursery is supplied from two sources: Mauch Chunk Creek and an artesian well. A "mixing box" above the raceway permits a control of the amount of creek or well water that is actually used. An unique feature here is the fact that temperature and flow can be controlled as the seasons and air temperatures require. Cal Ulshafer, current nursery manager, and his wife Virgie indicated that a winter temperature of about 46°F can be maintained thus allowing reasonable winter growth.

This is an advantage that many other nurseries do not have.

Pellets provide the basic diet with a liberal amount of venison thrown in. In fact, venison becomes pretty much the major food during the colder winter months in spite of the relatively warm water from the well.

Major streams stocked by the Jim Thorpe Sportsmen include Mauch Chunk Creek and Robinson's Creek. A special derby for children is set up on the section of Mauch Chunk Creek that passes through the club's property downstream from the nursery. Cooperating with "Fritz" Ohlsen, county WP, the derby is an annual event held the third Sunday in May for all youngsters below the license age. The club considers it one of their more successful ventures for the youngsters of the community.

Financing is always a problem of sorts for all cooperative nursery clubs. The Jim Thorpe people resolve their dollar difficulties by block shoots, profits from food sales, and other club funds and donations. Things seem to be going smoothly for the club in this department at the moment.

Then a word or two about the site itself is in order. A dirt road drops down into a bit of a mountain valley along Mauch Chunk Creek. Tall evergreens provide shade and add a picturesque quality of the postal card variety to the scene. Deer are a common sight and on occasion a black bear has been seen ambling down the path from the well toward the raceway. So far Mr. Bruin has been no trouble and no one has troubled Mr. Bruin.

And that's it for the men and women of the Jim Thorpe Sportsmen, doing their bit to improve trout fishing in Carbon County.

CO-OP staffer Byers, Nursery manager Ulshafer, and Waterways Patrolman Ohlsen discuss changes to be made on club's new dam upstream.



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AUGUST—1976

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DOCUMENTS SECTION

Shad in the Schuylkill? It's not too far away!



After the long, terrible and bitter winter at Valley Forge in 1877, Washington's troops were given a token of encouragement when a good shad run began up the Delaware Bay and River, and thence up the Schuylkill as far as Valley Forge. Through a combination of good temperatures and yet relatively low water, the troops were able to net thousands of shad. These were "poor folks' " fish in those days; but, to starving men they were far from that — they salted hundreds of barrels of shad for future use.

How encouraging it is that 1977 will quite probably see the beginning of construction of a fish passage on the Fairmount Park Dam on the Schuylkill, permitting the migration of the increasing populations of not only white shad, but other river herring upstream in the Schuylkill which will be only the beginning of anadromous runs — perhaps as far up as Pottstown.

To those who remember the terrible polluted conditions of the Schuylkill, even up until ten years ago, this will seem like a miracle. The cleanup campaigns on the Schuylkill have only begun, as far as aesthetics are concerned, but all the time since the passage of the tough Clean Streams Amendments of 1970 we have seen the return of other freshwater fish. With the completion of a three-year study, we have ample evidence that shad and other species are trying to get upstream to spawn.

After several meetings with Mayor Rizzo's staff, in which the Fish Commission and the U.S. Fish & Wildlife Service provided the engineering drawings, the City of Philadelphia has included this in their budget. We hope to see a vertical slot ladder appear as a reality on the west shore of the Fairmount Park Dam with a minimum of difficulty. Other dams upstream should not be difficult to handle, and Dr. Goddard has assured us of cooperation at the first of these at Flat Rock.

An excellent shad run in the Delaware River this year provided further impetus, and plantings of eggs in the Schuylkill should, in the next few years, help build up populations that could be the first generations to ascend beyond that first obstacle, which we understand was built very early in the 19th century. Other programs such as our successful streamside rearing facility on the Juniata — part of our Susquehanna Anadromous Fish Restoration Program — may be used to supplement the early populations of God-given resources that belong to all of the people in the Commonwealth and should never again be completely occluded by the shortsightedness of the dam builders.

This is all the more incentive for water quality watchdogs to make certain that all of our efforts are not wiped out by accidental or criminal spills of pollution. High water quality standards are an all year requirement — fish cannot live on averages.

Ralph W. Abele,
Executive Director

Pennsylvania Angler

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Volume 45 - No. 8

August, 1976

CONTENTS

My Susquehanna Initiation by Fred Burgess	8
Let 'Em Eat Pork by Loring D. Wilson	.....	10
Family Fishing by David R. Thompson	.....	14
Fungus — Fuzz on Fish by Cecil Houser	.....	21
The Slough Holes by Bill Betts	.....	23
Everything — From Sloops to Knots by Alan MacKay	.....	28

Front Cover: Between bites, our "Taking A Closer Look" columnist, Tom Fegely, keeps his camera handy — always on the lookout for a portrait of one of nature's "critters." This month it's a green frog.
Back Cover: Fred Reed and Paul Olsen, of Pottstown, display their fish for our "Fishing Outlook" columnist, George E. Dolnack, Jr.
They caught those panfish and catfish while fishing at Marsh Creek Dam.

MONTHLY COLUMNS

FISHING OUTLOOK	.....2	STREAM NOTES	.....26
LEAKY BOOTS4	ANGLER'S NOTEBOOK27
TAKING A CLOSER LOOK6	ASHORE & AFLOAT30

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You might not set any world record fishing the Perkiomen during the heat of summer, but it's relaxing just the same.

fishing outlook

by george e. dolnack, jr.

In its earlier days, it was called the Pahkehoma, Perquamink, Perkiomy, and Parkiomink. When Washington camped along both sides of this creek before meeting the British at Germantown, he referred to it as "Camp Perkioming." We know it as the Perkiomen, meaning *Cranberry Bog* in the Indian tongue.

Noted for its forges and mills, it was also considered a veritable fishermen's paradise. In addition to its native fish, the shad ran up it a

considerable distance before 1825 when the dams of the Schuylkill Navigation Company were built.

At the mouth of the Perkiomen, shad were caught by the thousands in small dams and nets. Farmers were reported to have hauled them home by the wagon load where they were salted for future use.

During the April shad run of 1778, the Continental Army that had wintered at Valley Forge set gill nets near Perkiomen junction. Troops on horseback, rode in the water and beat it with cut bushes to drive the shad into the nets. The starved troops feasted and it is said that the campground reeked of fish for a month afterward.

Today, the Perkiomen is still a fisherman's delight and its fishing outlook is great. From the small tasty sunny to the voracious musky, it offers a wide variety of action for the angler.

On the Perkiomen and its branches, some 44 miles of fishing

are available. The main stream cuts through nineteen miles of meadows, hills and steep rocky bluffs as it makes its way down from Green Lane to its ultimate confluence with the Schuylkill near Oaks and provides some of the best musky fishing in the southeast.

Old dams and numerous deep pools receive most of the attention for muskies on this stretch of water. These havens produce not only giant size muskies, but bass and panfish as well.

Some of the more popular holes include the Hendricks Pool at Hendricks Road; the old dam at Salford Station; the railroad bridge at Spring Mount; the Delphi Pool, also known as the "coal yard", where Swamp Creek merges with the Perkiomen; the Collegeville Pool; the Egypt Road Pool; the Goodrich Dam and the pool at the mouth of the Perkiomen which also has given up northern pike up to 36 inches.

Lures used successfully for mus-



Although the Perkiomen's pools can be fished from small boats, most fishing is done from the shoreline or by wading.

kies include big red and white Dardevles, six-inch Rapalas and Rebels, and large spinner type lures like the #5 Mepps. Suckers up to a foot long also make good musky fodder.

One angler was reported to have enticed his big fish with a white mouse! This ingenious fisherman rigs the mouse in a special harness, places it on a small piece of board that's tied to a string and sets it adrift. When the waterborne mouse reaches the desired spot, the angler yanks the board out from under the castaway whose water ballet soon attracts Mr. Musky.

Top Perkiomen smallmouth average out at about 15 inches. Minnows and hellgrammites are the most productive baits for this fighter with spinners and small minnow-type lures running second.

Though the entire length of the Perkiomen is populated with smallmouth, the downstream portion from Oaks to the mouth has

produced largemouth up to 23½ inches long.

An occasional walleye is also caught in the Perkiomen. One of the most recent taken came from the Delphi Pool and taped out at 27 inches.

Not to be overlooked is the bullhead fishing on the lower reaches. Best spots are the Collegeville Pool, Goodrich Dam and the Egypt Road Pool.

Float fishing the Perkiomen by canoe or rubber raft can be a chore because of the shallow areas and the dams. Because of this and the limited access, most anglers confine their piscatorial endeavors to shore fishing, wading, or fishing the larger pools from boats.

On the upper waters above Green Lane, trout are stocked from Palm to Route 100 and there is a good carry-over of them on this 4½-mile run. The West Branch, also above Green Lane, provides some good angling for smallmouth and panfish too.

If you're looking for an underfished area, on the East Branch from Schwenksville upstream you'll find a good population of smallmouth and some muskies.

The upstream portion of the Perkiomen — from Collegeville north — is accessible from Route 29 which more or less parallels the creek. It's a little trickier downstream since it's necessary to take some roads not shown on highway maps. Good references for the angler fishing the Perkiomen are topographic maps of the Perkiomenville, Collegeville and Valley Forge quadrangles.

Since Skippack Creek is a tributary of the Perkiomen, it also rates a mention. This stream is fast becoming popular among anglers. Trout have been stocked in the Skippack over the past two years from Visitation Bridge, below Ridge Pike, up to Forty Foot Bridge, at Route 73. Besides trout, smallmouth and panfish are also fair game here.



TURTLE RECIPE

Your stories in the June issue on Raystown Lake could not have come at a better time.

I intend to spend a week there this summer and am trying to convince two relatives from out of state to join me. I am sending a check for two extra copies of the June issue to pass on to them. If the stories on the lake do not convince them, nothing will. I am looking forward to the week there and also the *Angler* each month. Thanks to everyone concerned for putting out such a good magazine.

Also, for "Leaky Boots":

Cooking Turtles

(after dressing turtle — I've never found an easy way.)

Cut turtle in pieces.

Roll each piece in cornmeal.

Add salt and pepper.

Brown on each side in shortening.

Add small amount of water, cover and let steam until tender.

Use pan drippings for gravy.

You will not believe how good it is prepared this way; and, with mashed potatoes and gravy it will really turn you on!"

HARVEY L. DEBERRY
Reynoldsville

BAD NEWS!

I just can't pass up the opportunity of dropping you a few lines in regards to April's article in the *Angler* on "CATCHING WORMS WITH VINEGAR."

I am eighty-three years young. Am still working several days a week and also still find a little time for some fishing. This was the first time I ever heard of catching worms with vinegar — so I just had to try it.

After smuggling my wife's jar from the shelf, I went out on the lawn and followed instructions! I waited, and waited, and I'm still waiting to see *just one* worm stick his head from the ground! What I did get the next day was a nice brown spot on a nice green lawn! I thought, "What will my landlord say when he sees that brown spot?"

Knowing my landlord, I rushed down town, got a spray can of green paint to

match my lawn and I sprayed it green, hoping my landlord won't see it when he cuts the grass!

I'll bet you have received a lot of letters on this subject but would like to know if anyone did have any success! Cal Kern, (Member, Pennsylvania Fish Commission) who is a personal friend of mine, got a good razzing about it too!

Let me close here, telling you I look forward each month for the *Angler* and think you are doing a good job in every department you are covering.

HAL PLUSCH
Philadelphia

Nope, Hal, yours is the only letter we received "on this subject" . . . whether you mean the worms' failure to emerge — or a man spraying his grass green! Problem is, I suppose, that few people allow their wine to turn to vinegar! Ed.

BEST EVER?

I think the *Angler* is the best magazine ever. I am sorry, but I don't have enough money to subscribe. Therefore, I would appreciate it if you could send me any misprints or issues of past years. It doesn't matter how old they are. I go fishing a lot, and once again, would like to thank you for a fine magazine.

JOEL ZIMMERMAN (age 14)
Society of Brothers
New Meadow Run
Farmington, Pa. 15437

Send you "misprints"? How could we do a thing like that, Joel? Instead, we've sent you a few "fresh" ones which should keep you in reading material for a while. Ed.

CARP FAN —

Over the past few years I can only recall three articles written about carp (June '72, June '75 and August '75).

Not always having the opportunity to travel to nearby lakes or reservoirs, I thoroughly enjoy fishing for carp at Pennypack Creek which is only some 10 minutes away. Frequently, myself and a few neighbors will also go to the lake on the property of Rohm & Haas, and fish for carp at night. I find carp fishing very challenging and enjoyable.

I am writing you hoping that you could find the time and space to print more articles on carp fishing.

Thanking you in advance. I remain

CHARLES J. PUCKER
Philadelphia

We can't deny your charge, Good Buddy. Neither can we do a great deal about it. You see, we're almost at the mercy of our contributing free-lance writers who, for

the most part, pursue more glamorous gamefish: trout, bass, muskies, etc. No offense to our wordsmiths, but we challenge them to put down the trout rods for a spell, swap the skaters, spiders, bivalves, etc., for some corn and doughballs and have a go at the carp. It would undoubtedly be a humiliating day indeed — I speak from experience. Though I have caught trout and bass without number, and though I can attest to having caught carp, I will never reveal in print just how few carp I've caught! A smarter fish never swam. Ed.

NO PROBLEM!

Dear Ed:

"In your May issue you had something very dumb. Why would you write two stories on catching bluegills and sunfish? Any 'Dork' with a pole, hook, line and bait can catch one. On docks, everywhere, you see little kids catching them with no problem whatsoever."

An Angler Fan
J. SLAWICH
Mountain Top

In all probability we do something "dumb" in an issue now and then, "J" — but we didn't think the two articles to which you refer could be so described. One told the *purpose* of fishing for panfish, then what to do with them (along with what a local group did to promote the event); the other article dealt with techniques used in catching them.

We also ran two trout fishing articles and any "Dork" should be able to catch them, too. By the way, what's a "Dork"? (Check with your District Waterways Patrolman on stocking questions within your area.) Ed.

WOULDN'T MISS IT!

Bob Strong's letter in the May 1976 Leaky Boots Column has finally prompted me to sit down and write you this long overdue letter.

Being a former Pennsylvanian and now living near Chicago, Illinois, I wish to remind the Pennsylvania fishermen how lucky they are. I have to travel 240 miles into Wisconsin to reach good trout fishing.

Now down to the purpose of this letter. There are approximately 40 books on fishing in my library at home. Most of them are on Fly Tying with authors such as Flick, Quick, Jorgensen, McClane, Bates, Jennings and Swisher and Richards and I want to tell you and all the other *Angler* readers that the one section of the *Angler* I would not miss reading is "Fly Tying," by Chauncy K. Lively. I would rank him with the best.

As well written as it is and with such

excellent photography, I cannot understand how Mr. Lively gets away with writing only eight times per year. Hurray for Chauncy!

HERB WESTON
DesPlaines, Illinois

The eight-month series is Chauncy's choice, Herb. Ed.

MORE ON FLY TYING —

In reply to Bob Strong's letter in the May issue and his opposition to the fly tying articles, I find these articles very informative. Some of the special flies mentioned are not always found in conventional fly tying manuals. They are the personal creations of flies tested in local waters and could apply to a fly fisher in search of a special pattern.

The *Pennsylvania Angler* is really devoted to all-around fishing for all fishermen. It is very satisfying to read and I look forward to each issue with its varied articles. I hope the quality writing of the *Pennsylvania Angler* will be around for a long time — including the fly tying articles.

ARTHUR LECOURT
Laurel, Maryland

LOST . . .

Is it possible to print a lost item in your *Pennsylvania Angler*, "Leaky Boots" section? I lost a flyrod with automatic reel on it along Jerry Run in Cameron County on opening day of trout season. I left it set against a tree while I loaded the rest of my fishing gear into my truck. I drove back to look for it but it was gone. The rod is 7½ feet, blue in color, green floating double taper fly line and automatic reel. Would the finder be a real sportsman and contact me? Will pay phone call and postage to send it back. Thank you again.

ROBERT J. KNIGHT
R. D. #3
Manheim, Pa. 17545

If he's an *Angler* reader, Bob, we'll bet he does! Otherwise . . .? Ed.

A LITTLE MORE . . .

In response to Mr. Bob Strong's letter in Leaky Boots, May 1976 issue, I have been subscribing to the *Angler* magazine since about 1956. My son, who will be 17 this month, ties flies. He has built a library of fly tying information from all of my old magazines and finds the information on tying more descriptive and accurate than some of the books he has purchased on the subject.

Angler, please continue; your maga-

zine is excellent. In addition, my son and I have fished the Susquehanna River near Hallstead, Pennsylvania for about 10 years (near the town of Susquehanna). We have caught hundreds of walleyes in July and August, but they all seem to be out of the same mold, about 13 or 14 inches, keepers are few and far in between. Are these fish stunted, or just a young breed? Any answers to this? Thank you.

MR. RON ROSHAK AND DAVID
North Brunswick, New Jersey

"Same mold"? You could say that, Ron. Biologists would say you're catching all your walleyes from a given "year class." It's doubtful there is such a thing as a stunted walleye in the Susquehanna, what with those sharp teeth and all. July and August are simply not good months in which to catch large walleyes; small walleyes haven't learned that yet! Try fishing just before darkness settles in . . . plus an hour or so beyond, that might help. Most large walleyes, however, are caught in the colder months, November thru January being best (provided you've got open water on the river). There are exceptions, naturally, an occasional lunker turns up off schedule. Ed.

STILL MORE!

Re: Bob Strong's letter in "Leaky Boots." The biggest reason my husband subscribes to your magazine is due to Chauncy Lively's Fly Tying!

A person who is interested in Fly Tying such as my husband has over 50 books on the subject, but he's continually on the watch for more information.

Again, I must disagree, Mr. Strong, "Angler's Notebook" is not the best feature . . . it's one among many "best features." Thanks for a chance to sound off. A reader.

MRS. MICHAEL LUCCA
Stanchfield, Minnesota

In all fairness, Mrs. Lucca, we've got to pause and thank Bob Strong for opening up this can of worms . . . WHOOPS! Make that "box of flies"! Illinois, Maryland, New Jersey, and now Minnesota . . . although we've not heard from Alaska — yet — it wouldn't surprise us a bit if we did. Ed.

COMPLETE STRANGER!

This is my first time in writing you to state my opinion and to thank all the people connected with the publication of the *Angler* for the wonderful job you are all doing. It's a great magazine. The article I am writing now is not a gripe nor jealousy, but the picture of the gen-

tleman on the front cover is just about four times that I have seen him. I've wondered why? Is he connected with the *Angler*, or is he a fishing champion, or is it because you are in need of pictures? If so, I'd be happy to furnish a picture of my dad sitting in a boat with a rod in his hand. Please, if you will, publish an answer to this question in the *Angler*. Thank you.

JOHN R. ROBERTS, JR.
Edwardsville

Believe it or not, John, if the gentleman to whom you're referring is he who graced our May cover, you're wrong on all counts! He's none of the above mentioned, and he has never appeared on an *Angler* cover before. Be that as it may, we'd still be happy to see a picture of your dad sitting in a boat with a rod in his hand! At least we'd be sure he was having fun — fishing! Ed.

ANY WAY AT ALL!

For quite some time I have been reading the *Angler*, the pros and cons on boating articles in the *Angler*. Why not apply the democratic process and settle this once and for all. Print a ballot in the *Angler* and let the subscribers' views be known.

EMERSON D. PORTNER
York

P.S. For \$7.50 for a three-year subscription, I will take the *Angler* any way you wish to publish it.

Why not? Simply because it was that very sort of "democratic process" which involved the Pennsylvania Fish Commission with boats and boating 'way back in — would you believe — 1913! A ballot wouldn't "settle this once and for all," regardless of the final tally.

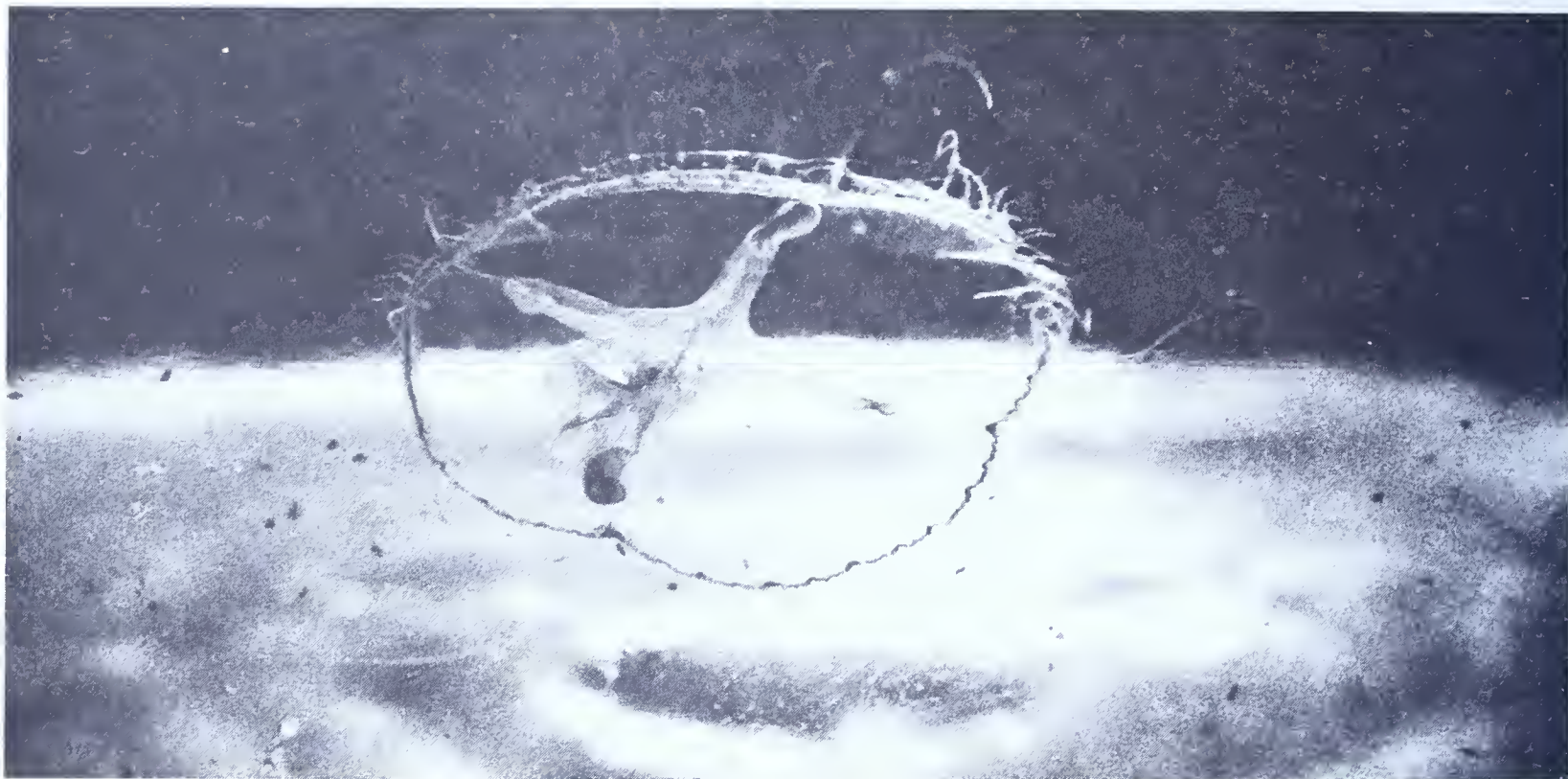
For instance, a friend of mine (and this is true!) upon seeing his favorite presidential candidate soundly trounced, stated simply, "Just proves what I've always believed . . . the fools in this country outnumber the intelligent considerably!" Ballots wouldn't convince many folks — one way or another. We just wish everyone felt as you do. Ed.

"RIGHT ON!"

Just to air my gripe:

So much has been written from readers putting down the boating articles, I say "Right On!" with them and keep them coming. Boating doesn't pertain to small stream fishing but trout season is only one of many. Look at the other kinds and take a look at our lakes and dams and try to tell those fishermen that

continued on page 25



This freshwater jellyfish, no larger than a dime, was discovered in Carbon County's Beltzville Lake.

Taking A Closer Look

by Tom Fegely

STRANGE CREATURES OF THE POND

What country boy hasn't idled away some warm August afternoon by taking his own biological survey of the myriad creatures that dwell in a nearby pond?

The only equipment needed for such a venture seems to be a pair of jeans that can be rolled to the knees and an innate curiosity to leave no stone unturned.

I wish that I had the time to wile away my afternoons *now* in search of the many strange and unusual creatures that dwell beneath the surface of a pond. Here the dragonfly and the bluegill spend their days

avoiding the gaping jaws of fat bass and ever-hungry snapping turtles. Along the shore herons and red-wings search out minnows and water bugs while water striders barely dimple the surface as they dart in and out of the cattail stems.

Because there is so much activity surrounding these more obvious creatures of the pond community, we oftentimes fail to recognize the more inconspicuous dwellers of the pond. Since they are smaller, or make less noise, or are camouflaged, or are simply fewer in numbers, the strangest creatures of the pond may be those that many of us don't even know exist.

FRESHWATER JELLYFISH

One of the most unusual animals to be found in a Pennsylvania pond is the freshwater jellyfish, *Craspedacusta sowerbyi*. No larger than a dime, this inland member of the *Coelenterate* phylum of invertebrates is found in water-filled quarries, reservoirs, and lakes as well. Some years it is so abundant that thousands of them can be seen swimming about while other years not a single specimen is sighted.

A close relative of the sea-dwelling jellyfish, *Craspedacusta* swims with rhythmic pulsations somewhat like the opening and closing of an

umbrella. It has the peculiar habit of rising to the surface, flipping over, then drifting slowly to the bottom with its tentacles outstretched to catch creatures smaller than itself. These small animals are killed by the stinging tentacles of the jellyfish, another feature peculiar to the *Coelenterate* clan.

Craspedacusta is the sole freshwater member of the jellyfish family to be found in North America. Mysterious as it is, this diminutive jellyfish tends to show up in ponds where it was never before seen.

Hydra

The tiny *Hydra*, equipped with long, drooping tentacles, is another *Coelenterate* that makes its home in ponds. Its tentacles are also equipped with microscopic stinging cells that paralyze copepods, water fleas, and other minute creatures that happen to touch the spider-like tentacles.

Hydras may be white, brown, pink, red, green or lacking completely in coloration. If they are green it is because of the green algae cells living within their slender, sac-like bodies. To sight one among a cluster of underwater plants is a real chore for it can stretch out until it looks like a frayed strand of thread or contract like a tiny, knobbed ball.

If food is abundant, *Hydras* eat until they bulge. At times they have been known to line hatching troughs in fish hatcheries where they capture small fry. In turn they are preyed upon by fingerling trout.

The *Hydra* reproduces both sexually and by an unusual method known as "budding". The "buds" form on the sides of the adult's body and break off as they mature, developing into free-living individuals themselves.

High school biology students are familiar with the *Hydra* as these interesting creatures are typically used to study the more primitive nervous systems of animals.

Daphnia

One of the most important groups of animals in the food chain of a pond is the one known as "water fleas." These microscopic critters serve as food for wading birds, aquatic insects, fish, and other animals, some of which may consume water fleas as 90 percent of their diet.

The best known water flea is *Daphnia*. Its large oval heart can be seen beating through a transparent body if viewed through a microscope. To the naked eye an accumulation of these creatures appear to dance about in water in convulsive jerks.

Some species of *Daphnia* have been found to follow migratory patterns; rising upwards at dawn, going down during the daylight hours, rising again at dusk, then going down again at night. As the smaller predators follow the *Daphnia*, so do the larger insects and fish that prey upon these second-level consumers. For a time, these seldom seen creatures may actually control the movements of an entire ecosystem.

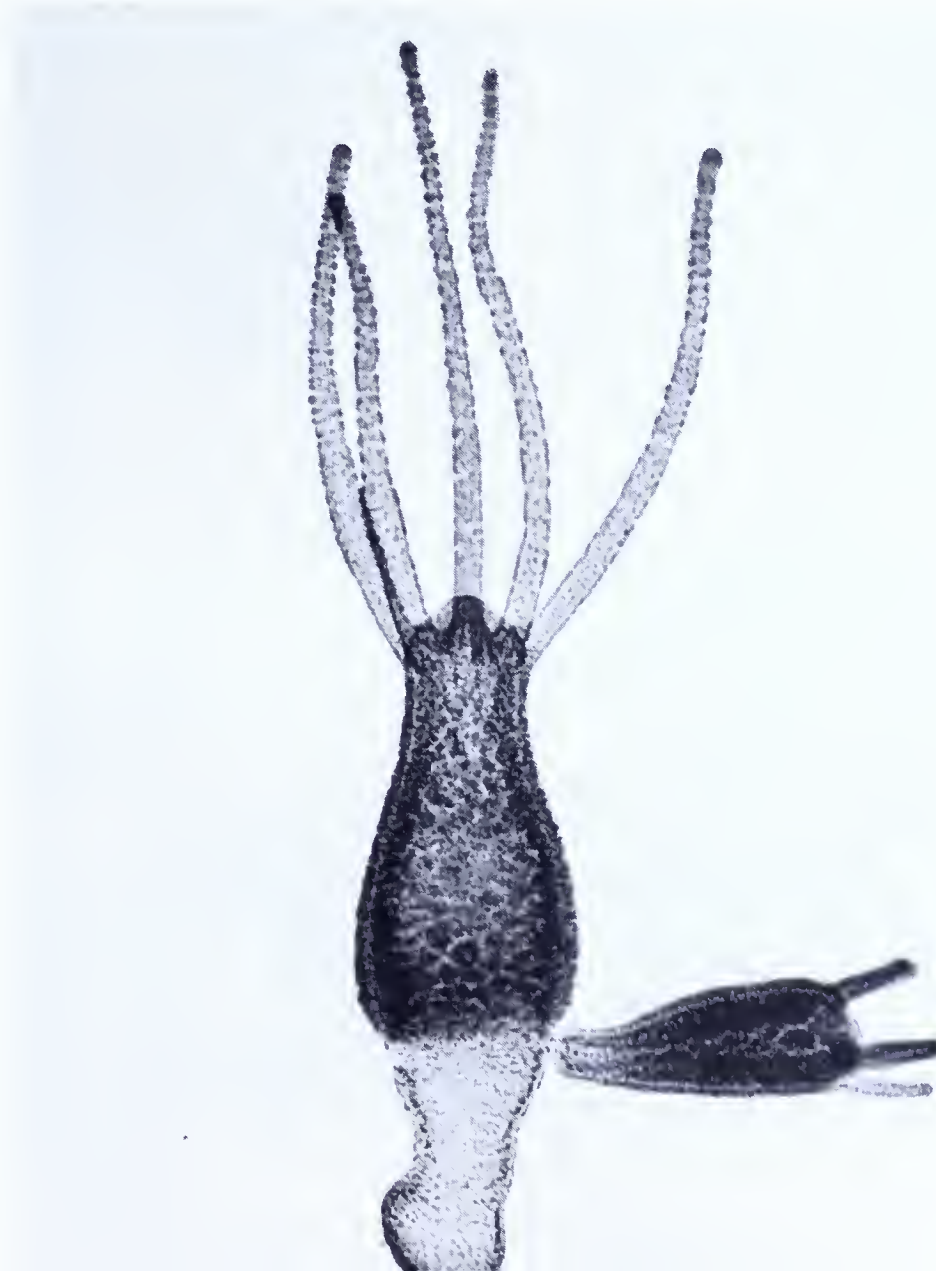
It would take a book to completely cover all of the strange creatures found in ponds across the Keystone State. Yet, a lazy summer's afternoon spent wading the shallows of some nearby pond might yield several dozen of these unusual animals. A simple fine-meshed dip net, a jar, a magnifying glass, and the curiosity of a young son or daughter are all that's needed to get a closer look at the fascinating residents of the pond.

AUGUST — 1976



Daphnia is a vital part of the aquatic food chain. So much so that it is cultured especially for feeding newly hatched gamefish fry at hatcheries.

This *Hydra*, below, has a "bud" growing from its side. Eventually the bud will break off, becoming a self-supporting individual to reproduce again.





My Susquehanna Initiation

by Fred Burgess

The silt churned through my holey sneakers as I gingerly dug through the damp, shredded newspaper in the bait can on my belt. A silent white crane winged in slow motion over Dave Sudekum and Bob Stover who were already 50 yards into the river, fishing. I was still stalling in the shallows, my hands trembling. Disgusted with myself, I slammed shut the lid to the bait can.

Not that I was afraid of the hellgrammites the bait can held. True, they were ugly . . . they reminded me of a many-legged cross between a cockroach and a submarine. But they were nothing more than 3-inch aquatic larva of the dobsonfly, and their pincers could only startle the careless.

No, it was the river that impressed me. My fishing experience had been limited to fishing for trout in the clear narrowness of Mountain Creek in Cumberland County. But I had always wanted to wade for river bass . . . the outdoor magazines had aroused my imagination. So, wishing to atone for skunking me at trout fishing late last spring, Dave and Bob had brought me along to the

Susquehanna near Marysville, Perry County. But, this river was wider even than my imagination! Was that the *Queen Mary* on the horizon? With complex foamy streaks of current brushing over ridges of half-submerged boulders stretching forever to the east. Anything that wide and complex had to be deep . . . and I could barely swim. I was intimidated!

It was late in August and there hadn't been a hard rain in a month, but the water was still sinister with ashy clouds of silt. The water was clear enough to see my feet, but its gray tint made it hard to determine where the deep holes were. So I waded to the base of one of the ridges and fearfully followed it away from the shore.

Seeing Dave net a bass ahead emboldened me, however, for I didn't want them to embarrass me again. *I had to catch as many as they caught.* So, when a narrow snout slurped up a floating speck about 30 feet in front of me, I decided to bait up. I flipped open my bait can and fumbled for a hellgrammite. To heck with the stonecats in my minnow

bucket! I was starting off with the big guns. As I carefully collared one of the bigger larva, though, another one whipped its head around to sink its pincers into the meat of my thumb. It held on, too, as I began to snap my hand back, and it let go only when it was sure it would catapult into the river. I tried to soothe my stinging thumb in my mouth, but I had to spit it out abruptly, for it had the acid taste of new innertube. "*Bass must have bad taste,*" I thought, "*if that's the flavor of hellgrammites!*"

But maybe not. I ruthlessly plucked out another hellgrammite and jockeyed it onto the hook, poking the tip under the hard collar of shell around its neck. Ah, success! Its pincers were useless against my newly adept fingers. Then, as though I were skillfully lacing a worm through the branches overhanging Mountain Creek, I cast the hellgrammite upstream and let the river flush it into the deep-looking trough between me and the next ridge. Somehow I was promptly snagged to the bottom and I tottered in confusion into the trough to loosen my

hook, expecting to sink to my armpits in gray water. But I found that even the deepest part of the trough couldn't come up to my hips. What a relief! I recovered my hellgrammite and confidently plowed toward the middle of the river, discovering the water was usually only thigh-deep. So that's what the smiling weathergirl meant last night when she said the river stage at Harrisburg was 2.6 feet and falling, I thought. What a revelation!

Waist-high water soon stalled my advance, however, so I lofted the hellgrammite upstream and vigilantly watched the river roll the pale curls of my line downstream. Then, just as it passed me, the line again tightened, and I hauled back instantly on the rod — only to find the line slack and the hook stripped of bait. I pulled out another hellgrammite and drifted it through again. This time I let the fish run with the hellgrammite as I waited for an indication that the bass was swallowing the hooked bait. But every time the fish slowed down and I flexed my arms in anticipation of setting the hook, the fish would surge ahead again. And, after a final surge, a deadness in the line told me that my patience had only let the now empty hook drift under another rock.

So, I went through the process again and again, losing more hellgrammites to "sure-fingered" fish and grasping boulders, all the while neglecting the stonecats in my bucket. I did manage to waylay three listless 9-inchers. But, understanding the fish's unevenly surging runs was beyond me; no matter when I'd try to set the hook I'd miss them.

Eventually, then, I poked my hook through the lips of a stonecat. Stonecats are nothing exotic — they are a miniature species of catfish which hide and feed among the bottom rocks of the river. I heaved the stonecat into one of the deeper trenches, then, twitching the rod periodically to prevent the bait's scooting beneath a rock. As I twitched the stonecat past a spur from one of the ridges I had a strike. With my thumb leaping to the line-release button, the bass ran with the bait, unsuspectingly hauling along my smoothly uncoiling line. Remembering how

the bass had been stealing the hellgrammites, it took all I had not to try to set the hook when this one stopped. But, just as it was supposed to, the bass steadily began to pull out my line again, and I knew that it was swallowing the bait. I waited for the bass to take up the slack; when the line was almost tight, I slammed the rod upward twice, taking several turns on the handle at the same time, firmly driving the hook into the boney mouth of the bass.

The big fish vaulted out of the river immediately, dancing on the splashing surface, shaking its head from side to side as if to warn me to lay off — but it couldn't throw my hook. Instead, it bullied its way easily downstream. I kept the tip of the rod as high as I could, though, to make its flight as exhausting as possible, and it soon turned aside. I began to pump it back towards me, repeatedly lowering the rod to whirlingly reel in the slack and then dragging the rod up to a vertical position, thus wrenching the fish closer. The bass soon rallied to bore toward the middle, however, its muscles fighting the bouncing flex of my rod. Again it tired, and again I recovered the line it had dragged from my reel, horsing the fish closer to me.

Within five minutes I had wrestled the bass close enough to see it. It

was cruising back and forth in front of me like a tiger on a leash, but I was sure that it was drained of resistance.

Just as I reached for my landing net, the bass dashed directly toward me, and for a moment I was sure it would torpedo between my legs. Without thinking, I retreated a step onto the edge of a slippery rock which tipped over and, my legs spreading wide, I sprawled backward into three feet of river! My rod and reel were jarred out of my hands, but all I could think about was to get my head above the surface and cough up the acid-tasting water. In a panic I clawed my way back to my feet, but tripped and tumbled again before I could stagger to a boulder slanting out of the water. I found the rod in the rocks, where the bass had dragged it to *saw through the line!*

I returned to the car to change into dry clothes. Dave and Bob soon joined me with their twelve bass which ranged from 12 to 17 inches. They had skunked me again. In a week I returned to school.

As soon as the weathergirl says that the river stage at Harrisburg is below three feet next summer, I'll dash for the bass in the Susquehanna . . . maybe they'll be hitting hellgrammites.

The big fish vaulted out of the river . . . shaking its head from side to side . . .



*For shallow, snag-ridden water,
a pork frog fished from shore
is just as effective, if not more so,
than fishing from a boat.*

Let 'em eat Pork!

by Loring D. Wilson





Need more proof? Both this six pounder and the 2 pounder below him fell to pork frogs on a weed wing spoon.

There was a bass lying beside the waterlogged stump. He wasn't a very big one, possibly 1½ lb., but he was there and I had been plugging the water for two hours without a strike. I had also been plugging that stump for fifteen minutes and I had seen the fish bulge the surface twice in a half-hearted attack upon my Injured Minnow. I switched to spinners, then a Rapala, and finally a plastic worm. He still wasn't interested. The more he refused the offerings I was flinging in his direction, the more frustrated I became. Finally, in desperation, I forsook the cantilever trays and delved into the bottom of the tacklebox to see what discarded forms of enticement I could dredge up. In one corner, I found an old bottle of "Pork Frogs." The lid was rusted shut, but the one ¼ oz. frog remaining in the bottle looked all right.

I managed to get the lid off with a pair of pliers; and, although the preservative had an odd smell to it, I figured that I certainly had nothing to lose. The pork frog was still solid and tough, so I threaded a silver

weedless spoon on my line and forced the hook through the slot in the pork frog.

As the spoon and frog sailed out toward the stump, I muttered a silent imprecation. I was immediately sorry I had not done so hours ago, for the spoon hadn't moved three feet toward the boat when there was a flash of water near the stump and I was solidly connected to the bass. He bulldogged for a few minutes before coming into the boat.

Without really considering what I was doing, I flipped the combination past the stump, close to a small body of lily pads, and started the retrieve. The first cast brought no luck, and on the second cast I told myself that the first bass had simply decided to kill whatever came past his lair next, and that had just happened to be my spoon. Therefore, I almost missed the next strike — but not quite. Approximately six feet from the pads, the spoon and frog were churning along the surface when a V-wave shot out of the pads straight for the lure. I noticed the wake when it was about a foot from the spoon, and in

my excitement almost pulled the spoon into the boat before the fish could strike. There was a spray of water, and the fish went down. I couldn't see the fish when it hit, but when I felt the characteristic head-shaking at the end of the line, I offered an educated guess.

I was right. Almost immediately, a chain pickerel exploded from the water before boring down again. Again there was the head-shaking activity, and suddenly the line went limp. I reeled in the snapped line, and cursed my folly for not using a wire leader. I also made a mental note to buy three jars of pork frogs at the very next opportunity.

Thinking back over that morning, I was surprised that I hadn't thought of handing the bass "pork" sooner. My salt and brackish water fishing lures are almost invariably equipped with the enticement of a strip of Pork Rind, whether it be a massive strip containing a sewn-in stainless steel hook for large striped bass in the surf, or a tiny fly rod strip to offer a little scent trail when using artificial flies for white perch. But, I suppose

that one of the problems fishermen face is that they often refuse to translate salt water tactics into freshwater strategy, and vice versa. I had been guilty of a grievous error: for years I had been applying freshwater fishing styles to the salt and brackish areas near my home, and knocking the devil out of perch, stripers, and blues in the process, but I had never done the reverse.

I was at a small lake later in the year, a lake which had been producing largemouths consistently throughout the spring. However, a powerline had been put through that year, and unseasonably heavy rains had washed quite a bit of silt into the water. While plastic worms had been the killers before, the bass turned up their noses at these offerings, in all likelihood because they simply couldn't see them in the murky water. I fished for hours with plastic worms in all colors, but never took a fish until I switched to a spoon and white pork rind frog. Within three hours I had three nice bass, the largest going slightly over three pounds. Without the pork rind I

would have been skunked.

Preserved pork rind for fishing comes in a variety of shapes and sizes; and, there is something to fit every need. Actually, pork rind gave rise to the development of the plastic worm, which is rated as one of the most phenomenal lures to hit the bass world in decades. The fact is that the plastic worm is phenomenal, not because it is so effective on bass, but because it couples that effectiveness with ease of handling and storage. You don't need jars of liquid brine to carry the plastic worms . . . just throw them in your tacklebox and go.

However, there are still certain disadvantages to the plastic worms. The chemicals in the plastic attack and melt certain other plastics (which is the reason you see "Worm-Proof Trays" advertised on so many tackleboxes today), and when that happens the result is one devil of a mess. And, although the worms are fairly resilient they do tear — especially the so-called "Jelly Worms." These extra soft worms are taken more readily by the

bass — that is, the bass hold onto them longer than those made of firmer plastic — but their life span is only about half that of the firmer baits. This life span can be improved by rigging a tail hook on the worm by threading 30 pound test monofilament through the length of the worm on the inside, the mono keeping the worm from snapping in two, but these soft worms are difficult to rig in that manner because quite frequently even the threading action will tear the worm apart. If you catch a pickerel on your first cast with the Jelly Worm, say goodbye to it, no matter how it is rigged.

The reason for the previous discourse on plastic worms is simply to show some of the inherent advantages of their predecessor, the "Pork Eel." The pork eel is still one of the most effective lures available when the water is clear, and can be rigged in the same manner as plastic worms, with the sole exception of internal threading. Even that can be carried out with patience, a long, very sharp needle, and a pair of pliers. And nothing . . . nothing

One of the author's favorite rigs: a pork frog on a weedless spoon.





In prime fish territory such as this, flip the weedless spoon and pork chunk onto one of the islands, slip it off into the water, reel rapidly across the pads, and watch out!

can tear up a pork eel in the water. I have even had turtles fasten onto the pork eels while I pulled them right up to the boat, with no damage at all to the lure.

The pork eel, of course, led to the development of the plastic imitations and has been supplanted by them, especially since the purple worm became such a killer. The eel which once was available only in black can now be purchased in purple as well as other colors; and, to my way of thinking the advantage is now swinging back to the pork bait rather than the plastic. The pork, as I have said, is far more durable, and storage is not really a problem since the jars are small enough to fit in any tacklebox, creel, or pocket. If stainless steel weedless hooks are used to rig the eel in the first place, they can be stored in the jar along with the eel. Regular bronzed hooks must be removed or they will rust in the brine.

If the pork eel is as effective as the plastic worm when the water is clear, then the pork frog is more effective than either when the water is

cloudy. The pork frog is a chunk of pork with its back dyed in spots the color of a leopard frog, and the belly either white, yellow, or black. For most fishing the white belly is the choice, with yellow a close second. At night, or on heavily overcast days, the black-bellied frog may take a few more fish, but I strongly doubt that there is a great advantage in stocking all three colors, since I have had some tremendous strikes at night on the standard white-bellied frog. In addition to the chunk part of the bait, there are two very thin "legs" which flutter behind the lure as it is retrieved, and look amazingly like a frog kicking.

The pork frog can be fished on a plain weedless hook and retrieved in short jerks; it can also be crawled along the bottom like a frog looking for emerging nymphs and other small food. But the most effective method I have found to date is to attach the pork frog to a weedless spoon, and toss it either into the middle of a patch of lily pads or right onto the shore, easing it off into the water like a real frog. I have found

that, in areas where bass are used to feeding on frogs, they watch the shoreline for just that reason. A spoon landing in the water will sometimes spook them, whereas a spoon landing on the shore and then "launching" itself (and the frog) into the shallows and swimming away apparently seems more natural to the bass, which often strike before the lure has moved a foot from shore.

There are two other "chunk" type of lures which are effective: the "Pollywog" and the "Spring Lizard." The former is a white rind with a single thin tail, and lengths of red yarn run through the thicker part of the chunk. I suppose that these are supposed to simulate blood streaming from an injured tadpole, but I personally believe that these baits are designed more to catch the fisherman than the fish. This is not a condemnation of their effectiveness, because the pollywog will catch bass almost as well as the pork frog. I just seriously doubt whether the red yarn

continued on page 32.



Panfish, which cooperate readily all season long, can provide lots of fun for fishing families.

Family Fishing

by David R. Thompson

When I suggested to a fishing partner that we take our families along to the lake for a few hours of fishing, he looked at me in disbelief and shook his head.

"The last time I tried fishing with my family all I did was untangle lines and listen to complaints about insects. Besides, my kids never catch much anyway," he complained.

He didn't have to shake a stick at me to get his message across. Family fishing was out. Perhaps I could have persuaded him to reconsider, but I knew from observation and experience that successful family fishing first requires a *willing leader* — a position some adults aren't prepared to fill.

His attitude toward family fishing isn't uncommon. Adults who've come to expect certain compensations from fishing such as leisure hours alone or an opportunity to get together with the guys are often disappointed when fishing with their families. What is supposed to be a relaxing, enjoyable and productive fishing trip often results in a frustrating experience because inexperienced young anglers required much attention and patience. Pressured parents tend to become too demanding of their children, expecting them to perform advanced fishing skills much too soon.

The worst result of the family fishing trip that fails to meet high expectations is youngsters and mothers receive the impression that fishing is too difficult for them to enjoy. I can think of few things worse than ruining a youngster's seemingly inborn interest in fish and fishing than losing patience with him or her, or failing to provide needed assistance during initial angling experiences.

In my family, the goal of family fishing isn't an obvious one. Instead of requiring a big stringer of fish to attain our goal, we endeavor to enjoy the outdoors as a family in as many ways as possible with fishing being a tool to reach that goal.

For example, there've been fishing trips when inquisitive family members developed side interests that had nothing to do with fishing but were very important to their development as young outdoorsmen. It is rewarding to a parent

when his children beg to go "fishing" because the last time they caught tadpoles (when the fish weren't biting), observed a muskrat swimming across the stream and feed on a mud bar, or watched a box turtle laying its eggs. What they recalled, in addition to actually fishing, were the interesting creatures they saw and things they did while fishing. And all this is an important part of the total fishing experience.

After our first son arrived nearly six years ago, I was duped into believing that family fishing would be easy. The infant was only three months old when my wife and I included him on a weekend camping and fishing trip. We pitched our new umbrella tent above the river where a bend formed a deep eddy. We'd heard that smallmouth bass and crappie were plentiful there and hoped to catch enough for our suppers.

Fishing is, of course, a sport that wives and mothers can enjoy as much as the men in their lives. For most women, all it takes to get them started fishing is an invitation to go along and instruction in the use of uncomplicated fishing gear.

Since the lady of the house should be invited to participate in family fishing, let me explain how my wife convinced herself that fishing is a great lady's sport by landing a twenty-two inch rainbow trout during a trip to Alaska. I'd gone into town that afternoon for supplies while she stood fishing from the riverbank. When I returned she displayed the huge trout, caught on a Dardevle. After she explained where and how the trout was taken, I nearly broke a leg in my eagerness to reach the river and outdo her, figuring I'd have no trouble catching a larger one. Let it suffice to state that she still holds the family record for the largest trout. Perhaps because she holds that distinction it has never been difficult to persuade her to go family fishing.

So, with her reputation at stake, she began catching crappies while bobber fishing offshore in front of the umbrella tent. Our son, too small to crawl, stayed strapped in his basket and hardly interfered at all with our fishing. The fish provided plenty of action, and we caught

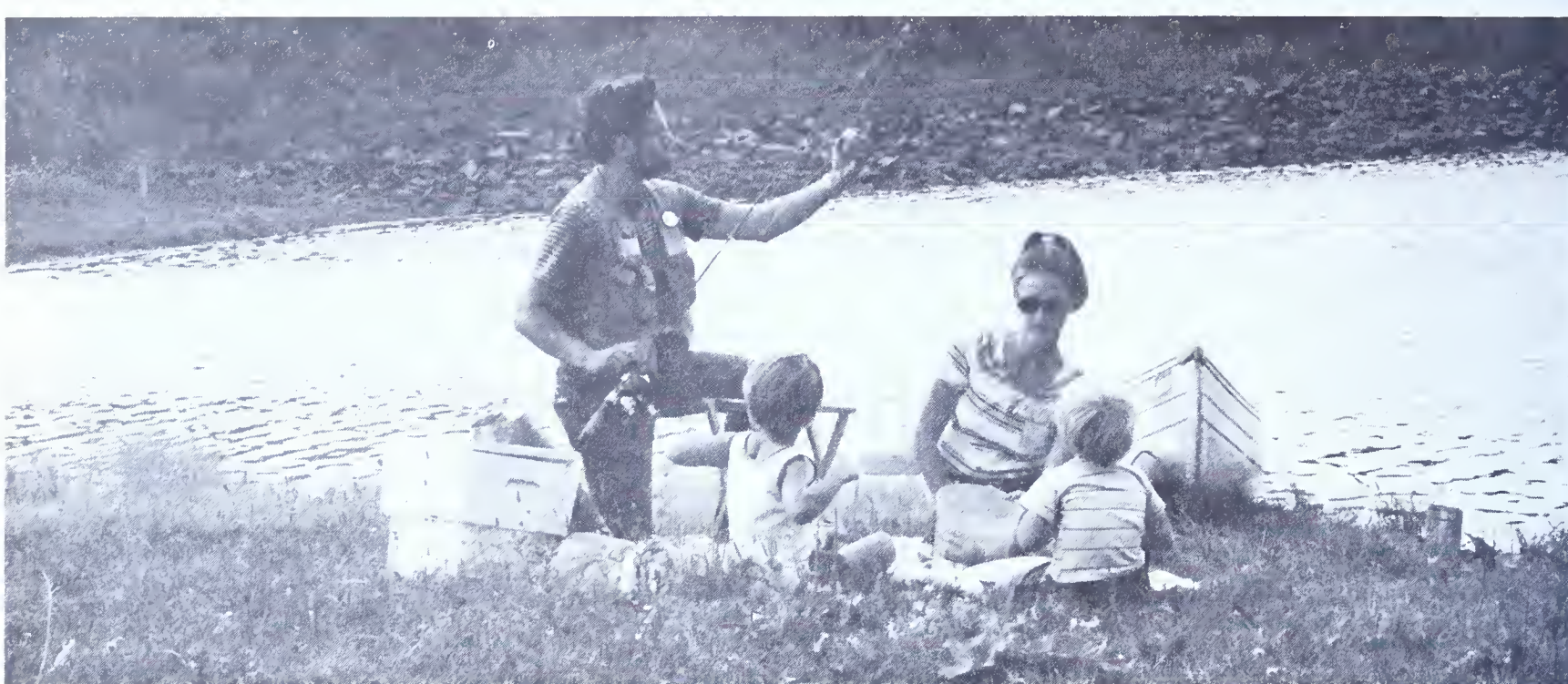
enough to meet our needs. When the weekend was over, I drove home assured that family fishing would be no problem.

Nearly six years have passed and a second son has arrived since my first family fishing experience. During those years, I learned that my original assessment of family fishing was mostly wishful thinking. Family fishing has not been as easy as I predicted. Every year as our young anglers try to do more things for themselves the problems I face seem to double. Because they are happiest when handling their own rods (before sufficient coordination and skill has developed), I spend much of my time untangling lines, baiting hooks, supervising; and, of course, counting to ten under my breath!

Since our family is composed of two pre-school age anglers, it generally doesn't pay for me to fish while they fish. If I accept from the outset that my job is to supervise and assist, I'm not disappointed when I don't get the opportunity to wander off alone and fish undisturbed. Furthermore, I have plenty of fun watching the boys catch fish and feel any parent can derive as much enjoyment watching his youngsters catch fish as he might receive from catching them himself.

Some antics of young anglers are as humorous as frustrating. If you've ever watched two youngsters simultaneously hook and land fish, you may know what I mean. Our sons often forget to use their reels in the excitement of landing fish. Instead, they run up the bank with their rods, hauling their catches ashore. Needless to point out, the tangled lines that result are impossible to solve. At such moments I can relate quite well with the fellow who refuses to go family fishing.

There are times when our "wild indians" fail to follow the fishing rules I attempt to teach them. At ages four and five, however, they are old enough and interested in learning to fish. I'm confident that my efforts to teach them will be rewarded in due time. One day they will have suddenly mastered the basic skills of baiting hooks, casting, controlling slack line, keeping the rod tip pointed toward the water rather than the sky plus other funda-



Snack time might give Dad a few minutes of fishing time to himself, above. Allowing the youngsters to partake of some of the bait-gathering chores, below, extends their appreciation of the sport. When boat fishing is planned, all children should wear an approved flotation device, right.



mentals that a youngster must learn if he or she is to develop skill and confidence.

Young anglers cannot be expected to have enough patience to quietly wait and watch their lines until fish bite. When fishing is slow, I know the boys will decide after a short wait that the bait must be cast to another spot and commence to do so themselves. That's when lines become tangled again. Or, I turn from assisting one son to see his brother searching along the stream through poison ivy — the very place he's been warned not to go near. On these days when they are particularly rambunctious and turn deaf ears to coaching, I've found that another activity such as a short hike is a useful outlet for overflowing energy and their short attention spans.

The older your children are, the easier family fishing becomes. Third graders and higher should have enough coordination and manual dexterity to learn to use fishing equipment after several outings. However, younger fishermen, especially pre-schoolers, require constant assistance (although, even at that stage, some youngsters handle fishing gear remarkably well).

It is advisable to select easy-to-use fishing equipment for youngsters. Our sons have inexpensive spincasting outfits. I found that a closed-face reel on a rod about five feet long is fine for youngsters or adults learning to fish. An alternative and better choice for many children is a cane pole with which no reel is used; casting is a relatively simple matter of controlling the short line tied to the tip of the pole.

Many youngsters, especially those raised in the South, start fishing with cane poles and enjoy them fine. This historic rod is not often seen in the hands of young Pennsylvania anglers, and it's a shame. Despite its unsophisticated appearance, a cane pole properly used will catch plenty of fish. I would have started our sons with them had they not conned me into having gear that "looks like Dad's."

As it turned out, they quickly learned to operate the reels and to cast reasonably well. They haven't mastered spincasting yet, but it

won't be long until they will cast consistently well by themselves.

Their mother has an ultralight spinning rod and open-face reel that I love to borrow. Her favorite outfit, however, is one much like those used by her sons. The closed-face reel is easier for her to use than the open-face reel because the line tangles less often. With this equipment, she can fish both lures and bait. Other women who don't consider themselves as advanced anglers are likely to find that my wife's favorite equipment is best for them too.

Although some women and youngsters are good fly fishermen, fly fishing is a bit difficult for entire families to enjoy. Children are certain to find fly fishing too difficult. It is something that individual family members can progress to as they become older and interested in new methods of angling.

A successful family fishing jaunt requires nearly as much planning as a safari. Also, parents must expect to compromise on when and where to fish so that the entire family and not just one or two members will enjoy the outing. Compromising, for instance, means that Dad, who often likes to rise early and fish as the sun peeps over the horizon, agrees with the family to reach the water at a more leisurely hour. He compromises even though he knows that fishing is apt to be best early.

Late evening fishing, another productive fishing time, poses problems for fishing families. Insects are usually most bothersome at dusk. Also, in fading light or darkness it becomes difficult for tyro fishermen to handle their equipment. For these reasons, it is best not to plan family fishing trips real early or late in the day. Exceptions are families composed of older children who require less supervision. Such families may want to experiment with early morning and late evening fishing since these times of day produce most fish during summer.

I learned on the opening of trout season last year that the elements have considerable influence upon the success or failure of family outings. That day I took the boys to a nearby trout stream and forgot their gloves. Had the weather been milder, they could have fished in

comfort long enough to possibly catch a trout or two in the promising hole beneath a huge sycamore. But the morning turned cold and windy, and their hands became red with cold *fifteen minutes after the season opened!* We reluctantly went home without having had a single bite. I learned then the importance of taking clothing that is appropriate for the season and the fickle moods of Mother Nature.

Most family fishing is done during summer when cold weather is something we wish for as perspiration oozes out of us. Hot days, however, are not designed for family fishing any more than cold days. In July, while fishing along a shadeless lake shore on a breezeless afternoon, it was too uncomfortable to enjoy fishing. Even the fish on that hot afternoon sought shelter and weren't biting. Although there was shade along the opposite shore, the brush made it unsuitable for family fishing. I know now to schedule family excursions on days when temperatures are tolerable.

The best place for family fishing has little or no brush, wires, fence, or other objects along the bank to hamper casting. It's a good idea to choose a place having a comfortable spot to sit. The water should contain few weeds and debris to reduce the number of times lines become hung up. It must be remembered, however, that fish are often found at the edges of weed beds or near submerged logs, stumps and brush or other underwater shelter and it might be necessary to fish near such places in order to catch fish.

For safety reasons, the bank having a gradual slope is preferable to one with a steep drop into deep water. If the bank does drop off sharply, it is important that children wear personal flotation devices while fishing. The same precaution should be taken by families that use either a canoe or boat.

When family members are young and inexperienced, no emphasis should be placed upon catching big fish. Experienced fishermen know that the big ones are often elusive and are doubly so for unskilled anglers. (That doesn't rule out the possibility of a beginner catching a lunker.) A good choice for a family

Take care when choosing a shoreline location from which to fish. The presence of logs for seats makes waiting for bites more comfortable.



Once the action begins, however, you'll find that it's difficult for young anglers to remain seated. Biting fish erase boredom!



Author's sons, Erik and Bridger, take time out to inspect some of their catch.

fishing place, then, is one where almost any kind of fish can be taken by beginners. Novice anglers and especially children care little about seeking impressive gamefish. They prefer to catch panfish — bluegills, sunfish, crappies or rock bass — or, even pesky chubs rather than fish a noted trout or bass haven and catch little or nothing because they lacked angling know-how.

Our sons have frequently caught chubs with delight and never once complained that the trout weren't biting. I admit that in recent years I've grown to appreciate any fish, chubs included, that can be caught by a child whose face beams happily upon pulling his finned prize ashore.

My wife, however, has outgrown chubs and stunted panfish. The other day, in fact, she complained about the four-inch bluegills that took her bait before larger fish had an opportunity. This may mean it is time for her to advance to fishing tactics and baits or lures designed to catch larger specimens.

It is always fun for me to explore new fishing places. If I don't find fish I'm not disappointed. Family outings, on the other hand, are not

designed for exploring. Untested fishing spots that prove to hold few fish (or are difficult for family members to fish) are quite disappointing to anxious young anglers. It is preferable to locate promising fishing places and use them for family fishing.

For instance: I was trout fishing in Bixler's Run and located what promised to be a panfish "gold mine." It was evident by the trail along the bank that other fishermen had been using the same area. Even so, I caught one bluegill after another and decided this spot was tailored to family fishing.

That weekend our family returned to the run with fishing gear and a picnic lunch. (A lunch, by the way, adds much enjoyment to family outings.) In about two hours, the boys and their mother caught enough panfish to provide the next day's dinner. By using this tested spot for family fishing, a successful and enjoyable outing was assured.

Unfortunately, the obvious family fishing places are often so hard-fished that even panfish may be spooky and difficult to catch, especially the large ones. A solution, if

the family cooperates, would be to fish these popular summer spots early in the morning when the water is coolest and fish are feeding. Another possibility, if you experience difficulty in finding a suitable family fishing place, is to locate a farm pond that has been stocked and ask the landowner for permission to thin out the forage fish which are likely to be panfish.

Once stocked, many ponds aren't fished often enough. They become overpopulated with forage fish so that many landowners welcome fishermen to help control the number of fish. A landowner may not, however, want many of the gamefish removed from the pond. So be certain to ask him if there are special rules you should observe.

Fishing on private property gives youngsters an opportunity to offer to share their catches with the landowner. Fishermen are never too young to learn good outdoor manners and sportsmanship.

The simplest, most productive and exciting method I know of for teaching both youngsters and adults to fish is bobber fishing for panfish. Using gear previously described, a snap-on bobber is attached to the line above the bait. If the fish can be seen just below the surface, the bobber can be positioned about two feet above the bait. If no fish are visible, the bobber is tested at greater heights above the bait until fish are found.

Six- or eight-pound test monofilament line is fine for beginners concentrating on panfish. A lighter line would be strong enough but tends to tangle more and stands less abuse. Using a No. 8 hook embellished with a worm, young anglers are apt to catch anything from trout and bass to suckers and fallfish, in addition to panfish.

Unless fish at a particular location are caught consistently on such baits as corn, cheese, salmon eggs, doughballs, insects or another live bait, I recommend both worms and nightcrawlers for family fishing. Both baits stay on a hook well; and, more importantly, fish love them. It may help to clamp a light split shot to the line about eight inches above the hook to keep the bait down where the fish are.

Now comes the fun: After the bait



Lunchtime is always a happy time. A folding seat provides an ideal way for mothers to relax on a family fishing trip.

is in the water, both student and coach watch the bobber which might twitch, bob, or move up or downstream, or be pulled underwater when a fish bites. With practice, the student learns to set the hook at the proper time — usually when the bobber is pulled below the surface. An important point to stress in setting the hook is that the rod must be jerked sharply upward — not just lifted in a sweeping motion.

Although there is no reason to unduly worry about fishing accidents, it is advisable to carry a small first aid kit to treat cuts and abrasions. Though snakebites are rare while fishing, parents should know what to

do in event someone is bitten by a poisonous snake. And, how to handle a hook that becomes embedded in a hand or elsewhere. It would be similarly prudent to note the location of the nearest medical center or physician if you're in unfamiliar country.

One of the most valuable items to include on any fishing trip is insect repellent. During summer, when most families fish, insects are almost certain to be encountered and they can ruin an outing for the unprepared.

Since personalities and circumstances vary from family to family, the right road to enjoyable family

fishing is not the same for every family. And certainly not every fishing adventure will be successful, no matter how much effort is made. The unexpected thunderstorm, a cut hand, or finicky fish that refuse to bite are problems which will confront your family sooner or later. And although such problems seem doubly frustrating during family excursions, they should not dampen a family's enthusiasm. The door to the out-of-doors through fishing should remain open to families — despite early frustrations. With practice, family fishing becomes a pleasurable way to strengthen the bond between each member.

Fungus . . .

fuzz on fish

by Cecil R. Houser
Diagnostic Pathology
Benner Spring
Fish Research Station

During fall weekends, many people visit our various fish cultural stations to look over the operations. Usually during such visits it is not unusual for a visitor to ask the fish culturist what the large white or brown fuzzy blotches are on the fish and what causes them. In the same respect, during early summer months we receive many letters and calls from private pond owners and lake fishermen wondering what the fuzzy blotches are on the fish that they raise or catch. These fuzzy blotches, ranging from white, to

yellow, to brown, and covering many different parts of the fish's anatomy, are actually plants; more commonly known as water mold or fungus which may belong to any of a diverse number of genetic groups. This fungus is commonly found at all times in the water. Usually associated with diseases as a secondary invader, these fungi may be called opportunists in that they lay in waiting for an opening on the fish which they can effectively attach themselves to. This may occur in various ways, but before going into those ways let us look at the fish and some of the methods it uses to repel disease forces.

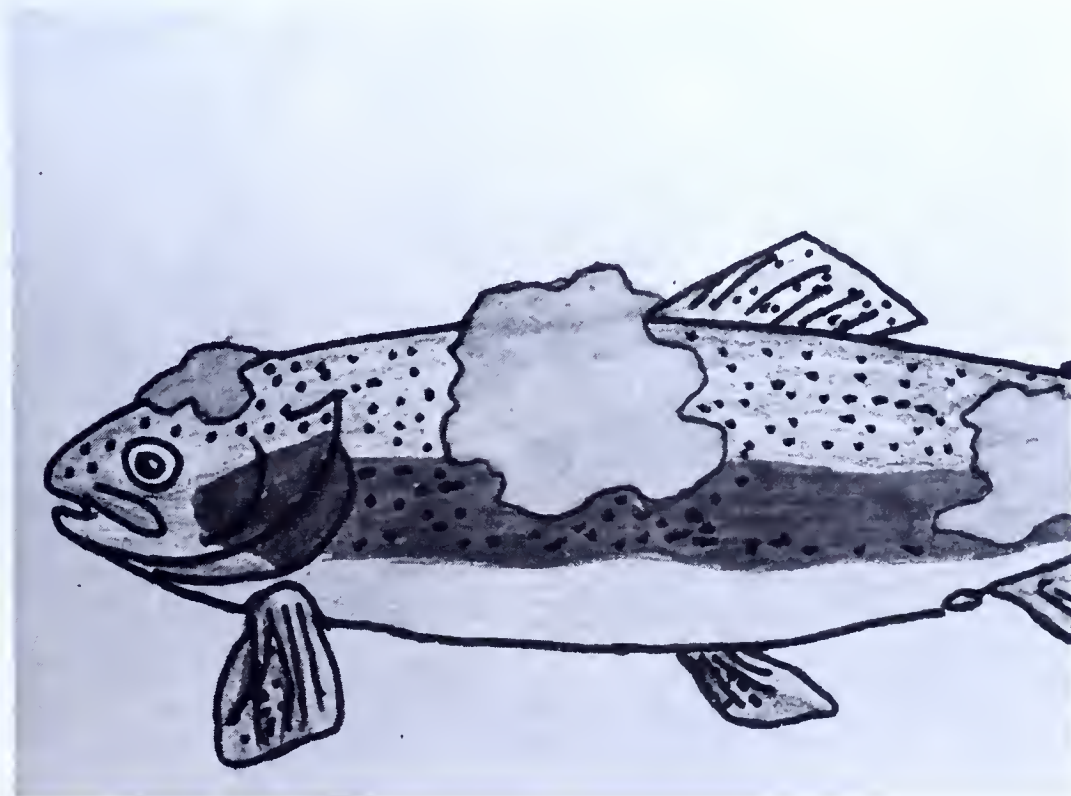
Covering the fish is a mucus coating, composed of various cells and chemical agents, which act as a physical barrier to repel certain disease organisms. The next physical barrier is the scales, and then the skin, which, while being physical, is composed of various cells that work together to wall off an infection. If these barriers are successfully broken down by any of several different means, the fungus will have the chance to attach itself to the fish and grow.

And, the barriers *are broken* by different means. One way is that during the spawning period (this is when the majority of fungus problems occur) the fish will rub on the

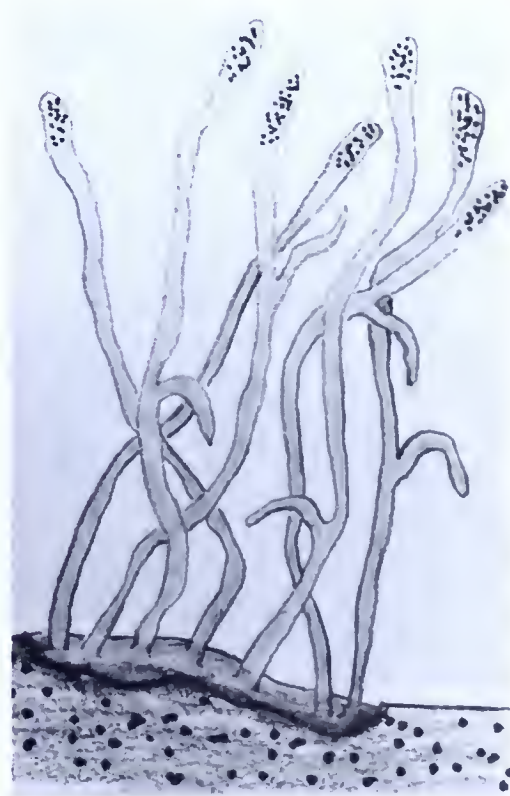
bottom of the pond trying to make a nest to lay its eggs, continually wearing away the barriers. Also, during this spawning period fish tend to pick at one another with their sharp teeth leaving wounds or scars.

Parasites may attack the fish in sufficient numbers to effectively break down the barrier either by their own action or by the fish rubbing on the bottom of the pond to rid itself of the pests. Thus, the entrance has been opened and the fungus sends out many tiny spores which attach to the wound and begin to feed, grow, and reproduce at a very fast rate. Once this fungus has begun to reproduce it is virtually impossible to control, that is why the fish look so bad when visitors see them in the fall during spawning season.

The fungus not only attacks fish, but also incubating fish eggs and can cause a very high loss in the incubators if no means of control is utilized. Most fish will survive a fungus infection, while some may die, as with other diseases of fish. As is often stated, and it is so with this particular disease, it cannot be transmitted to man and does not affect the food value or the taste of the fish. So the next time you visit a hatchery, catch a fish — or whatever the situation is where you see these fuzzy blotches — you can say, "I know what that is!"



Rainbow trout with fungus infection.



Microscopic view of fungus on trout.



The Slough Holes

by Bill Betts



"Angling success seemed to depend only on locating the nests and waiting."

I wonder sometimes, whenever I think back to my farmboy frolics, whether youngsters nowadays ever get any fun out of what we used to call, with our eighth-grade pronunciation, the "*Slaw Holes*." In that time long ago we had our ol' swimmin' hole, and our wild brook trout streams, and the big rivers, like the Chemung and the Susquehanna and the Allegheny with their carp and bass and fallfish — but we had something else too.

I'll never forget the day we discovered it. We were on a pennyroyal hike. That means we were walking the railroad tracks along the Little Clearfield Creek, watching in the cinders for the tiny shoots of the pennyroyal, that pungent mint which, after it has been dried in bunches, produces such a tasty tea.

It was a bright, bright summer day, swirling in sunshine. Down the tracks as far as you could see the heat rose up from the iron rails and from the cinderbeds. To the right of us wandered the already shallow waters of the creek, and if you stood high on the bank you could see the mullet lying on the bottom, nose upstream.

But to the left of us stood another kind of water altogether. It was black and stagnant. It was the water trapped in the gulches along the railroad tracks from the high water of the spring and fed only by rains.

The sense of death was everywhere. It leered out at us from the spectral spikes of hemlocks. It hung in the stifling miasma heavy on the water. It reached our noses in fetid fumes.

And yet, it did not take us boys long to discover that the presence of death, while real enough, did not mean the absence of life. Strangely, in these horribly black and stagnant waters, in the decay and stench of the rotting logs and ugly muck, life was teeming.

A casual observer may not have noticed, but for some reason on this day we loitered long enough at the edge of the swamp to perceive, finally, a colorful sunfish in his nest. He had gotten down to some gravel somehow through all that ooze and was now jealously guarding the spot he had cleared.

And then we spotted another. And another. And another.

I suppose we all got the idea at about the same time. And fortunately our ever-cheerful mother was easy game for three mischievous boys. When after buckwheat cakes and pork tenderloin the next morning she prepared to read off the day's assignments, we declared ourselves

ready for another pennyroyal mission. "We'll even bring back some wild strawberries," we persuaded. "My," she said, "*this is refreshing*."

When we set out that morning, besides our pennyroyal sacks, we carried crude fishing poles and such primitive angling equipment as farm boys are likely to have, including grotesque bait boxes crowded with small garden worms.

As we approached the swamp, without the least sprig of pennyroyal yet, we heard the eerie call of the pileated woodpecker, and then we spotted him in his tuxedo black-and-white and flashy red crest, retreating deeper into the dense hemlock. Somebody suggested that the big bird was laughing at us, but we went ahead anyway.

We sneaked up as best we could on the spots at which we had seen the sunfish the day before, but we were all much too eager to profit any from stealth. A really big one saw us coming, and with the first flick of the rod he was gone.

We soon learned, though, that the sunfish don't stay away long. Angling success seemed to depend only on locating the nests and waiting.

We caught a bunch of them, on tiny bits of worms. And those we caught we transported gingerly across the tracks to the creek, "where they'll have better water," Tom insisted.

But, as always happens when one is catching fish right and left, there comes a time when the well runs dry abruptly. Ever resourceful, we youngsters rolled up our dungarees and shod in our shabby sneakers tentatively edged out into the dark waters. The water itself was hardly more than a foot deep anywhere, but the muck was plenty deep, and we soon found ourselves in up to our hips and constantly searching for some underwater log or stump on which to secure a footing. Blissfully ignorant of the trouble we could get into in such mire, we took off in our separate directions, looking for nesting sunnies.

We found lots of sunfish, in cavities of stumps, in hollowed-out spots along logs, and even in well exposed depressions in the middle of the swamp. We discovered out here, too, that the sunfish, while he may be Mr. Big in the bog, is not the only fish in the pond. Here, to our astonishment, we found tiny chain pickerel, anywhere from four to fourteen inches long. They were really skitterish, and of course

would have nothing to do with worms, or even with the little tin liz which I had always found so effective in the creek. Once they saw us they were impossible to catch.

Except by snagging. We were not aware in those days that the technique of placing a bare treble hook under the jaws of an unhungry fish was not listed among those angling methods approved by the Pennsylvania Fish Commission! However, unlike many illegal activities, our snagging operations proved most of the time to be quite fruitless.

The pickerel were too shy. And too quick. Once in a while one or another of us would flip one of the pencil thin beauties from the black water, but most of the time they were too fast for us. With a little flick of the tail, the intended would all of a sudden appear three feet left or right of where he had been, or maybe ten feet. You hardly even saw him get from here to there, but here he isn't and there he is.

Once Dan, while hoping to seduce a big pumpkinseed with a particularly luscious chunk of worm, was flabbergasted to find his bait gobbled up by a big (well, eight inches) catfish. So we promptly placed catfish among the objects of our angling enterprise, and soon learned

how to place the worm at the bottom of sunken logs and leave it till the ugly whiskers would appear. As it turned out, there were plenty of catfish in the swamp.

Well, we had lots of good times that summer, and for many summers after that, in the Slaw Holes. We caught a whole washtub full of fish one day, and lugged them all the way home in water to stock our pasture stream and our spring. But mostly the fish we caught we tossed into the creek, or, when we were wading far out, just released them into the swamp.

One of the more unpleasant by-products of this kind of fishing came in the form of leeches. We never emerged from the Slaw Holes without a number of leeches attached to our bare legs. Bloodsuckers we called them, and they staggered us a bit at first, they were so repulsive. But by and by we made a game of it. It wasn't who caught the most sunnies anymore, it was who could produce the most bloodsuckers on a single expedition.

There were turtles too in the bog, slipping from logs, heads popping up here and there, swimming underwater . . . doggie fashion.

And snakes. Water snakes they were, though when the excitement



"It wasn't who caught the most sunnies anymore, it was who could produce the most bloodsuckers on a single expedition."

was running thin we *fancied* they were cottonmouth moccasins.

And salamanders. We made a game out of just counting them. They were everywhere, some a bright vermilion, some a spotted olive color.

Lots of water birds kept us company. Of course the red-winged blackbird gave us that old "kong-garee" all day long. And then there were the herons, green and great blue, standing sentinel on their stilts, testing the quickness of the pickerel. The herons competed with the belted kingfisher, whose raucous chatter always announced his change of perches.

One day along the railroad tracks

there crossed just in front of us a fierce weasel in hot pursuit of a tiny cottontail. We did the best we could to discourage him, probably without any lasting success.

Late in the summer a woodcock startled us with his abrupt burst from the brush and his strange whistle. We followed his veering flight to where he came down and were able to get him up three more times.

But the Slaw Holes were not only for summer. Not at all.

We didn't fish through the ice in the wintertime; but we had great times in the frozen swamp. Skating. What fun to race down stretches of clear ice, gathering speed enough to hurdle a hemlock log, or a stump

even. And then the hockey games, with trees to take advantage of and mossy mounds to watch out for.

Came March, and the Slaw Holes were all at once alive with the spring peepers, those tiny tree toads whose incessant chorus thrilled us all. The game now was to see who could sneak up on one of these little fellows while he was blowing his bubble and capture him.

Year round we enjoyed the Slaw Holes. I wonder now, do youngsters still get into those strange dark waters there at the "Y" downstream from Olanta on Little Clearfield Creek, or into the same kind of fun in some other Pennsylvania watershed? I hope so.

Leaky Boots

continued from page 5.

boating doesn't go hand-in-hand with fishing. I consider two pages out of your entire book only fair. You don't go into comparisons in weight, size, price, etc., that the regular boating magazines do to advertise boats. You advertise fishing.

As far as this family is concerned your magazine has something for everyone. You cannot publish a magazine exclusively on one subject and expect approval of everyone. And, no one has the right to expect it either. Thank you for your time and wonderful magazine.

KAREN REASOR
Luzerne Mines

Next time a cool breeze drifts over my boat on a hot August afternoon, I'll think of you Karen. Thanks! Ed.

A "BIT OF HOME" —

Well, the *Pennsylvania Angler* has done it again, and I might add, I'm very glad they did.

I had moved from Pennsylvania to Lubbock, Texas and had advised you of the address change. Naturally, then I started receiving the *Angler* in Lubbock and looked forward to my copy each month. Up until March 1975, I had been a lifelong resident of Pennsylvania and now, the *Angler* is like a little bit of home each month.

About six or eight months later, my wife and I moved to Irving Texas, a suburb of Dallas. I had forgotten to send an address change to the *Angler* and stopped receiving it. To my surprise, in February I received my *Angler* right on time with my new address noted. It was especially surprising since I have been

bragging to some of my new Texan neighbors about ice fishing in Pennsylvania (something they don't know much about firsthand) and with the February copy of the *Angler*, cover and all, I could show them. Something like "*a picture is worth a thousand words.*"

Texas has a very good Parks and Wildlife Commission; but, by far, Pennsylvania has the best I have yet to see or hear about in their Fish Commission and Game Commission. So good, in fact, I'm bringing my wife (who's from Texas) up to Pennsylvania to do some fishing and hunting this fall.

Thanks to both of them for all the years of enjoyment I've already had and look forward to more enjoyment in the years to come. You're beautiful, Pennsylvania!

JIM POPP, JR.
Irving, Texas

You better believe it, "TEX"! Ed.

SURPRISE CATCH!

I am taking this opportunity, while enclosing my check for renewal, to relate to you a fish story which is true.

On Sunday, April 18 of this year, my younger brother, Mark, 14, and I, and a couple of friends were trout fishing in Tionesta Creek. I was fishing upstream and having good luck while my brother was downstream, shore fishing, and not doing very well. As I was making my way downstream, preparing to head back to camp, I heard the screech of a reel. Looking toward shore, I saw my brother holding onto his pole for dear life. My first thought was that he had a big sucker on the line. As I rushed

toward him in excitement, the water in front of him split open and a huge fish appeared in the air. As I finally got to shore, he had landed his fish: a 31-inch musky! Mark later told me he was fishing for minnows since he wasn't having any luck with the trout. He landed this fish with a size 10 hook, baited with a red-worm. Mark definitely has something on me now! The fish was returned to the water unharmed, and still mean.

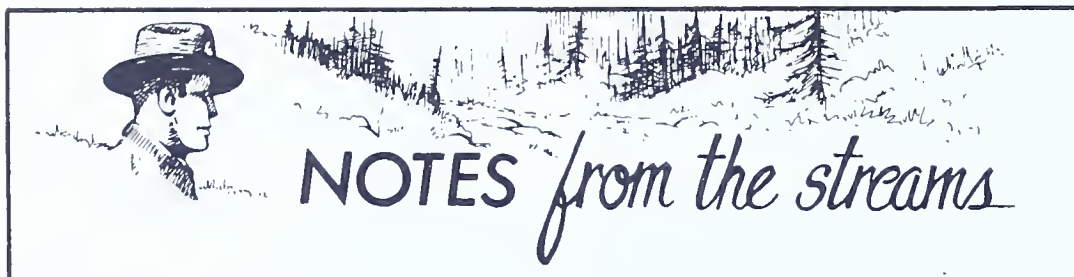
TIMOTHY ZIETAK
Pittsburgh

In Memoriam



Francis J. Rotchford
1932-1976

WATERWAYS PATROLMAN ROTCHFORD was a graduate of the First Class of officers from the H. R. Stackhouse Training School. First assigned to the Philadelphia/Montgomery County District, he was later assigned to the Montgomery County District where he served until his death on May 22, 1976.



WILL THEY EVER LEARN?

This year, like all the others, I have received many litter complaints from landowners who own stream frontage. The complaints are generally registered right before trout season. I can't help but wonder if I am the only one that realizes that the lush grasses of summer, the blowing, falling leaves of autumn and the snows of winter successfully cover this mess in their respective seasons. However, in early spring there is nothing to screen all the thoughtless acts of years gone by.

When will they ever learn? This year in my district alone one controlling agency nearly shut down my best trout lake because of the litter that accumulated on the first day of the season. Another agency nearly shut down an access road to one of the best stretches of the Lehigh River because of litter. One landowner did shut down his two hundred yards of stream bank to fishing, again, *because of litter!*

Robert Lynn Steiner
Waterways Patrolman
S/Luzerne County

PREPAREDNESS COUNTS!

While returning to the Regional Office after an early morning patrol on the first day of trout season, I stopped to visit with four young fellows, 11 to 15 years old, who were fishing West Licking Creek. I could not help noticing the array of assorted equipment: 4 bicycles, 5 fishing rods, 3 tackle boxes, 4 baseball gloves, 3 baseballs, 3 ball bats, 2 tennis rackets, approximately one gallon of worms and 13 trout! No question about it, these young fellows were all set to take advantage of a beautiful warm spring day.

Richard Owens
Regional Supervisor
Southcentral Region

CLEAN GETAWAY!

While on patrol of the approved trout streams which are closed between March 14th and the opening day of trout season, one's purpose is, of course, to keep illegal fishing and/or the taking of trout from these streams, by any method, to a minimum.

Well, it is known that some people do fish for trout illegally. But, while on patrol one day during the first week of April, two suspects were observed fishing these closed streams . . . I might add that they did not have fishing licenses, either. On top of all that, *they ate the evidence raw* while we watched them! They also got away; one was a Great Blue Heron and the other was an Osprey. In all fairness to these fishermen, we could not tell exactly what species of fish were being eaten.

Warren W. Singer, Jr.
Waterways Patrolman
Adams/Northern York Counties

FORBIDDEN!

One of my deputies relayed a humorous incident that happened on Kishacoquillas Creek just after the eight o'clock opening of trout season on April 17th.

A young fellow, aged 7 or 8, hooked onto a nice palomino trout. He played the trout very well and was assisted in landing the big fish by a man fishing nearby. The older angler measured the fish to be a little over 16-inches long and handed it to the youngster. The boy promptly tossed the fish back into the stream! The startled fisherman who had assisted the boy asked *why* he threw the fish back. The young boy answered very matter-of-factly, "*My daddy said I was going trout fishing and I wasn't allowed to bring home any suckers!*"

Larry R. Baker
Waterways Patrolman
Mifflin/Juniata Counties

DOING JUST FINE!

While working Koon Lake on the first day of trout season, I had two very unusual experiences. The fishermen had started to come into the area about 3:00 p.m. Friday to make sure they got the right spot to catch those big trout!

There were about 600 fishermen around the lake, come midnight. So, I started making my rounds around the lake. I was about halfway around the lake when I heard loud laughter. I went to check it out and there were about eight fellows standing on the bank when I came upon them. I asked what was go-

ing on, and when I looked around I had the answer to my question. One of the fellows decided to take his Saturday night's bath on Saturday morning — about 3:00 a.m.! I asked him if he was alright and he said, "Yes." I told him he wasn't to try to catch the fish — that he would have to wait till 8:00 a.m. and fish for them like any other person with a rod and reel! He said, "Okay." So I left.

I had checked a lot of fishermen that morning, but there weren't too many fish on the stringers. But, the fishermen were ready for them; their stringers were anchored to the ground with the other ends in the lake. I came across a man fishing about 11:30 a.m. and asked him how he was doing. He said, "Pretty good." I asked him if I could check his stringer and he said, "Yes." When I lifted the stringer I expected to find some trout on the end of it, but I didn't. On the end of his stringer, instead of fish, was a six-pack of beer. I put the six-pack back into the lake and asked where his fish were. He said, "What fish? You asked me *how I was doing* and I said, 'pretty good' — *but that doesn't mean I'm catching fish!*" So beware, fellow officers, of what you ask fishermen today, because the answer they give you might mean something else!

Thomas A. Greaser
Deputy Waterways Patrolman
Bedford County

FINAL REQUEST!

While attempting to serve a warrant in Wilkes-Barre recently, I was greeted at the door by a woman who identified herself as the defendant's mother. When I explained why I was there, she informed me that her son was working and would be home around 5:30 p.m. for supper. She also informed me that her son had briefed her about his violation of the Fish Law and told her that he was not going to pay his fine; when the time came *he would sit his time out in jail*. The mother requested (before I left) that if I were going to come back that evening, to please come after 6:00 p.m. This would give her son time to eat his supper before I took him to jail. **The Last Meal???**

Claude M. Neifert
Waterways Patrolman
N/Luzerne County

RECORD BREAKER —

The first day of the 1976 trout season was extremely warm and a lot of Pennsylvania anglers were out along the streams. Never before were so many family groups seen by the deputies and myself. There were also many more youngsters with their fathers than we

had ever seen in previous years. All were enjoying the fine weather and the mighty fine fishing.

Warren W. Singer, Jr.
Waterways Patrolman
Adams/N. York Counties

PATTERN, PLEASE?

Due to the warm opening day the traditional baits of salmon, eggs, worms, and minnows were just not taking trout. A good hatch was obvious on the Lehigh River below F. E. Walter Dam. A fisherman asked me what they were hitting as his boys hadn't caught a fish. I replied that the trout were taking an emerging nymph. He said, "Good! The boys are fly fishermen and I'm sure they'll have some *emergency* nymphs."

I guess that late in the afternoon of the first day, if you haven't caught a trout, you need an "emergency" bait of some kind.

Robert Lynn Steiner
Waterways Patrolman
S/Luzerne County

Every fisherman should read the *Pennsylvania Angler!*

OK! SEND THE ANGLER TO:

.....
Name (please print)

.....
Street or RD — Include Box Number

.....
City

.....
State

.....
Zipcode

REMITTANCE ENCLOSED:

☐ \$3.00 — One Year

☐ \$7.50 — Three Years

(Use check or Money Order — DO NOT SEND CASH)

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Eyes of a bass are extremely efficient at night. The fish can see objects in the water invisible to the human eye. But the bass is not able to distinguish between colors at night, even though able to see the shape and size of the object in the water.

During the hot months, fish for small-mouth bass after the sun sets. The fish hole up in deep, cool water during the sunny hours of the day but move into the shallows to feed at dusk. Often they will continue feeding all night, returning to their deeper haunts only after the summer sun begins heating the water.

Leaders longer than nine feet are difficult for the average angler to handle and are not necessary under most fishing conditions.

Muddler Minnows are effective lures and are available in a wide range of sizes. Those tied on hooks in sizes 6 and 8 are the most useful for both trout and bass fishing.

Caddis patterns in both wet flies and nymphs do not get the attention they deserve from fly fishermen. The caddis is regarded as the most prolific insect in our trout waters, far more abundant than the mayflies.

Before wading into any piece of water deep enough to hold fish, carefully cover

the water just ahead. You'll be surprised how often you find trout feeding in relatively shallow water, closer to shore than to the middle of the pool.

Fishing does not stop at the end of the summer, when hatches of aquatic insects diminish sharply. Grasshoppers, ants, beetles, and other land insects are dropping on the water surface from shoreline trees or weeds, and trout feed on them. It pays to fish frequently with terrestrial insect imitations.

A jerky, erratic retrieve is not always the best way to use a spinner. Try retrieving the lure at a steady pace, just fast enough to cause the blade to turn.

Tiny lures weighing from 1/16th to 1/4th ounce, fished on a four-pound-test line with very light spinning tackle, will take respectable bass in open water near weed beds. But keep clear of the weeds. A hooked bass, which will almost always head into the weeds, is tough to handle on very light tackle.

Walleyes feed at water depths of as much as 30 or 40 feet in the hot days of summer. They move into the shallows to feed only at night, and then they can be taken on noisy surface lures. Jigs and live bait are best for deep-water angling for walleyes.

Hone and sharpen the hooks on jigs, even brand new ones.

Good streamer patterns for bass anglers include the Royal Coachman, Mickey Finn, large Muddler Minnows, and streamers dressed with orange, black, or yellow marabou.

A trout rises in the water, takes a look at your floating fly, then turns away. Why? One reason may be that although the pattern is correct, the size is not. Try a smaller size of the same pattern.

Imparting very little action to a bass surface lure is harder than it may seem. One method that works is to point the rod directly at the lure and then to work the lure with gentle twitches of the line instead of action in the rod tip.

Spoons, spinners, and other lures with unpainted blades should be kept clean and highly polished. It is the flash and glitter of the metal that attracts fish.

If bass ignore surface lures on a bright moonlight night, try lures that go well down into the water, even bumping on the bottom.

Use the lightest and smallest bobber you can see easily. Big, heavy bobbers set up resistance and make it harder to hook a fish that has taken the baited hook suspended beneath the bobber.

New Pennsylvania Boating Course Has *EVERYTHING* *from sloops to knots*

by Alan MacKay

For many years now, boating writers have been extolling the virtues of the many available safe boating courses taught by a host of volunteer organizations. Many boaters have taken advantage of the opportunities. A lot more have not, although I've yet to hear of anyone who doesn't intend to — "soon as time permits." The trouble is, most courses are conducted in the evening where they run into heavy competition from every other leisure or volunteer activity — from the PTA to Starsky and Hutch. I know the feeling. For two years now, I've been trying to get myself enrolled in a couple of the U.S. Power Squadron courses. They are excellent courses; I do intend to get there . . . (yet).

So, we seem to have a situation where a lot of interest is generated, but also with a lot of obstacles lying in the path between intent and accomplishment. Skipping over the Mohammed-mountain analogy as lightly as possible, what we have done this year, is to bring Pennsylvania Basic Boating Course to every registered boat owner in the Commonwealth — via correspondence.

170,000 Basic Boating Courses were sent out in the early part of June to every family having a watercraft registered in Pennsylvania. This is not to imply that only powerboats, who currently comprise the registration rolls, are the only folks deemed worthy of receiving the course. Not so at all! It's just that this is the only group for whom we have a current name and address. Sailors, paddlers, and rowers are invited, read: *encouraged*, to participate, but it requires a postcard

request to get the course as we don't know who you are.

The course consists of an 80 page text-workbook containing 21 chapters with sections covering terminology, regulations, safety equipment, rules-of-the-road, small craft handling, aids to navigation, weather, first aid, accident reporting, and lots of other good stuff. A fifty question examination is included at the end of the text along with four postcard answer forms that will enable four persons to take the course from each book. The completed cards are then mailed back to the Commission where they will be scored and a certificate and ID card awarded to each person recording a score of 80% or better.

It is hoped that the whole family will get involved with the course, in their spare time, and share the learning experience with each other. A course like this one varies considerably from the standard concept of "test" in that collusion is encouraged. Families are encouraged to study together and take the exam together. If there is a difference of opinion concerning a particular answer, people have the opportunity to discuss the possibilities and look up the information in the book. When completing the exams, the book is still available for reference. It is hoped that it will become a valuable part of every boatman's library.

Following is a sample of some of the questions listed at the end of the course. Try them out — see how you rate. If you did receive a course in the mail we hope you will complete it. If you did not receive the course and would like one, drop us a card.

FINAL SKIPPER'S SCORE

9. The best protection against fire in the engine compartment is:
 - (a) maximum ventilation.
 - (b) keep hatch closed at all times.
 - (c) minimum flow of air through compartment.
 - (d) install a fixed CO₂ system.
10. To begin mouth to mouth resuscitation, you should:
 - (a) place victim on back.
 - (b) clear mouth of foreign matter or any obstruction.
 - (c) pinch nostrils to prevent leakage of air.
 - (d) do all three of the above.
11. A buoy flying a red flag with a white diagonal stripe indicates:
 - (a) first leg of a sailing race course.
 - (b) divers down - steer clear by at least 50 feet.
 - (c) ski slalom course - steer well clear.
 - (d) hatchery fish in area - proceed slowly.
12. Before starting an inboard engine, the engine compartment must be thoroughly ventilated to:
 - (a) clear compartment of possible gas vapors.
 - (b) give carburetor plenty of fresh air.
 - (c) cool brushes on the starter motor.
 - (d) blow sparks away from knife switches.
13. On State Parks and Fish Commission-controlled bodies of water, regulations require:
 - (a) youngsters under 16 years to wear a PFD.
 - (b) all passengers to wear a PFD.
 - (c) youngsters under 9 years and non-swimmers to wear a PFD.
 - (d) youngsters under 16 years and non-swimmers to wear a PFD.
14. Approved portable gasoline tanks should be:
 - (a) removed from the boat for refueling.
 - (b) filled by keeping the nozzle of the pump, or the gas can spout in contact with the tank while fueling.
 - (c) filled completely so condensation can't occur.
 - (d) a and b above.
15. To avoid the chance of carbon monoxide poisoning:
 - (a) do not breath gasoline fumes while fueling.
 - (b) make sure the cabin is well ventilated.
 - (c) extinguish all gas lanterns, gas stoves or catalytic heaters before going to bed at night.
 - (d) follow b and c listed above.
16. The best first aid for a victim with a burn is:
 - (a) rub down with grease from outdrive unit.
 - (b) saturate area with any oil or grease.
 - (c) cover area immediately with wool blankets.
 - (d) dunk burned area in cold water.
17. When in the locks:
 - (a) wear a lifesaving device while handling mooring lines.
 - (b) caution passengers to remain seated.
 - (c) have at least one 75-foot mooring line.
 - (d) All three of the above answers are correct.
18. When approaching a lock chamber, a green light means:
 - (a) Caution, stand clear!
 - (b) Enter.
 - (c) Approach Slowly.
 - (d) Yield to another vessel.
19. The most common characteristic of buoys in the Uniform State Waterway Marking System is:
 - (a) their solid orange color.
 - (b) they are always located in pairs on the port and starboard sides.
 - (c) the horizontal orange bands at the top and bottom.
 - (d) the distinctive red and black horizontal stripes.
20. If a person falls overboard, you should:
 - (a) stop the motor immediately.
 - (b) swing the stern away by turning the wheel away from the side the person went over.
 - (c) turn the wheel toward the side the person went over and toss a lifesaving device.
 - (d) report the accident immediately.



Many marinas and marine dealers have CB base stations complete with high-gain roof mounted antennas for the boater's convenience and safety.

Seems like everybody . . . including music stores . . . sells the small, lightweight, popular CB radio these days.

Ashore & Afloat

by Gene Winters

The Coast Guard in no way supports or encourages the use of the Citizen's Band Radio Service for marine safety purposes!

Now that officialdom's policy has been paraphrased out of the way, let's take a more practical look at life on the water. The *approved* two-way marine radiotelephone system is VHF-FM. In areas where this system is operational, like Lake Erie, bays and coastal waters, it is serving its intended purpose

reasonably well. The determinations behind the selection and endorsement of the VHF-FM system by both the Federal Communications Commission (FCC) and the U.S. Coast Guard are legitimate, reasonable and justified.

But, to my personal way of thinking, there comes a time and place when official policy may be defensibly overlooked (as differentiated from "breaking the law") in the quest for personal safety and security. I think such reasoning applies to communication systems for the majority of inland state boaters. Until the day (if and when it ever comes) the VHF-FM system, with appropriate monitoring and rescue capabilities, becomes universally operative, I believe the inland boater is justified in using whatever radio system is legal, practical, and available to fill his needs, particularly safety.

Over the past months, the FCC has apparently come to accept this

fact also. I cannot help but believe the powers-that-be within the Coast Guard, unofficially at least, must also sympathize with the small boat operator's need for a workable two-way radio system . . . although they may not desire or be free to express such thoughts openly. Until the desired VHF-FM system becomes feasible and workable in *all* waters, Citizen's Band radio is and will continue to fill the gap; and, apparently, quite well.

The FCC's attitude shift on Citizen's Radio Service is obvious: use of Channel 9, the CB emergency channel, which provides assistance to travelers has been clarified to include *boats* and aircraft, etc. Channel 11 has now been established by the FCC as a calling and switch channel. While there is no *required* monitoring of a specific channel on CB as there is in VHF-FM, the great number of additional sets in use, both on the water and ashore, must at least partially make up for this un-

Mounted astern and out of the way, this antenna could someday transmit an urgent call for help.

Many river boaters have formed an "unofficial" CB network among themselves on the waters they frequent.



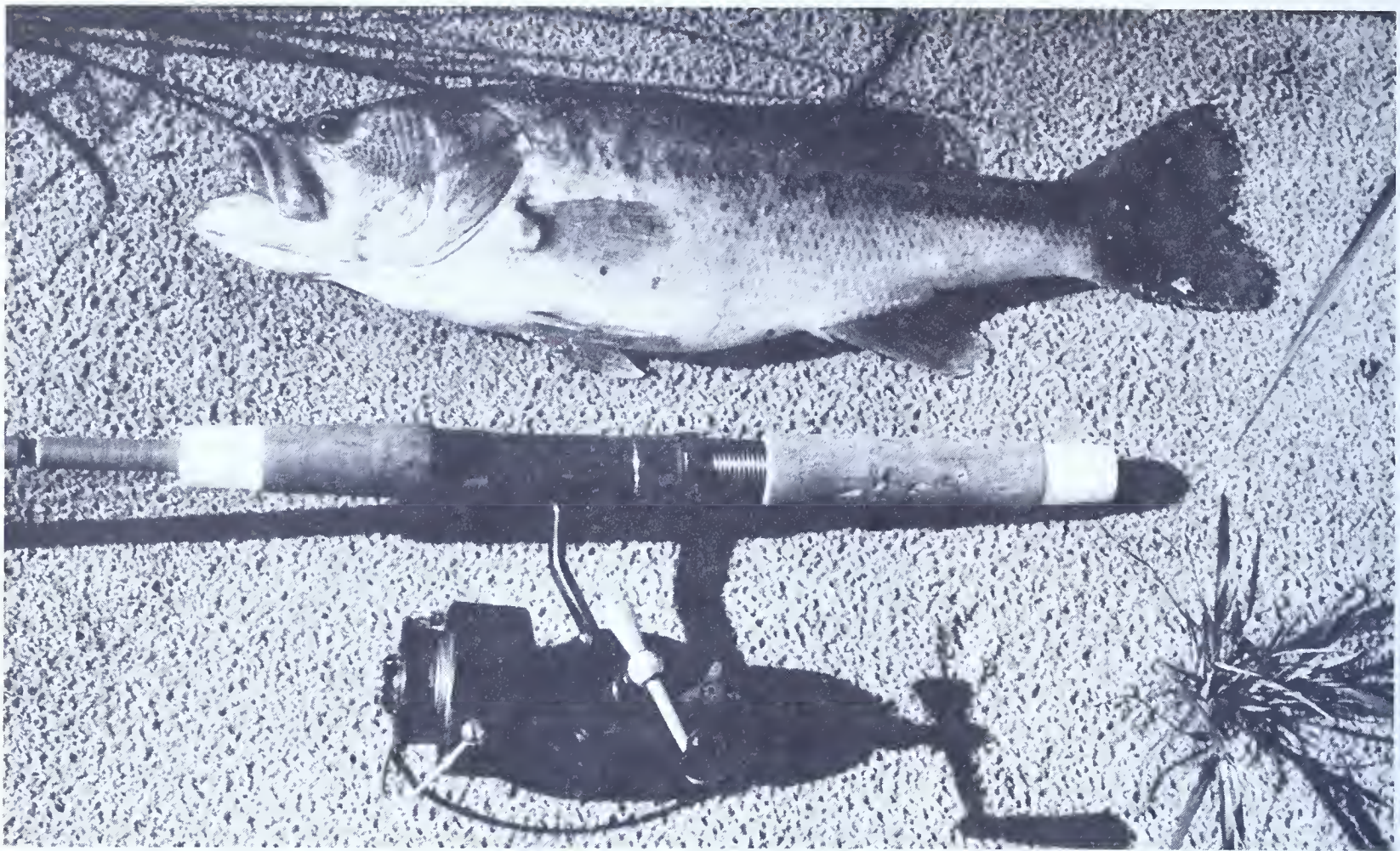
called-for weakness in the CB system. The Citizens Radio Service today represents by far the greatest number of two-way radio users outside of government agencies! The FCC now receives in one month more applications for CB licenses than it previously received in a year. Truck stops, music stores, discount stores, marinas, appliance dealers, even restaurants are selling CB units in record numbers. Cars, boats, planes, trucks, homes . . . it seems like everyone is suddenly into CB!

In addition to thousands of people who spend hours (as a hobby in itself) just monitoring other "CBers," the majority of marinas and marine dealers have installed base stations and monitor Channel 9. Most of us have seen the REACT (Radio Emergency Associated Citizens Team) insignia emblazoned on car bumpers, doors and windows, etc. This volunteer national safety organization has a proven record of monitoring Channel 9 twenty-four

hours a day, standing by to help in any emergency that may arise, be it a highway accident, search for a missing person or lost child, a fire, or a boat in distress! You can trailer and boat all over Pennsylvania or any state and literally hundreds if not thousands of CBers, ashore or afloat, will be monitoring the giant party line to hear a call for help. If they themselves are not in a position to help, statistics show they have a proven track record of relaying word instantly to officials who can render professional and qualified assistance.

Not use CB afloat? If the VHF-FM system is not operational in a given area, what sane man can dispute that any two-way radio system afloat is certainly far better than no radio at all? Even in areas where VHF-FM is in operation, CB is still an ideal backup rig and allows more personal conversations. Indeed, non-substantive (hobby) use is now permitted on all "free" chan-

nels. In addition, Channel 11 has been designated as a calling and switching channel. Communications are still limited to 5 minutes duration but waiting time between communications has been reduced to one minute. CBers can now relay messages for other operators up to a distance of 115 miles. All channels except Channels 9 and 11 can be used for communications between units of different stations. The 5-year license fee has been reduced to \$4.00 from \$20.00; and, add to this the fact that CB units cost about half as much as a VHF-FM unit. In addition, CB units are usually smaller and more adaptive to smaller boats. Under recent rule changes, talking about fishing hotspots, arranging a "happy hour" rendezvous, or, telling your wife you'll be in later than you planned, all add up to additional plus signs for the CB field. In areas where VHF-FM has no "listening ears," a CB radio could literally be a lifesaver!



A pork frog and spinning gear accounted for this 2½ lb. largemouth in silted water.

Let 'em eat Pork

continued from page 13.

adds to the bassing ability of the lure. I have not yet tried the pollywog on pickerel, but I believe that the red and white combination might prove effective on them, since they do seem to prefer that color combination.

The Spring Lizard is a long chunk lure, cut to resemble (in some vague manner!) the salamanders which, in the live state, are such excellent bass baits. Again, I believe these interest the fisherman, in his search for variety, more than they interest the fish. These do *not* perform as well as the pork frogs on the run-of-the-mill bass; but, strangely, they do seem to pull in more lunkers, when they strike, than do the frogs. Possibly this only involves the larger size — approximately 4½" as opposed to 2½". At any rate, at about 50¢ apiece, they are certainly inexpensive enough to add to your tackle kit, and they are worth a try when the

bass are running large. Both the Spring Lizard and the Pollywog are fished in the same manner as are the Pork Frogs.

The other remaining pork baits are simply attractor additives rather than lures in themselves, and must be used with spoons, jigs, or plugs. Primarily, they are thin strips of pork rind, ranging anywhere from ¾" to 5" in length and from ⅛" to ½" in width, with the general thickness being approximately ⅛". They can be purchased in white, black, red, yellow, and purple. Depending upon the size, you will get between 4 and 24 strips for about a dollar. Even the larger ones, at 25¢ apiece, are a worthwhile investment since they can frequently mean the difference between a day of action and a day of frustration.

There are also some "fake pork rind" strips on the market, made of either Dacron, chamois cloth, or plastic. These work occasionally as attractors, but there is simply no way that they are as effective as the natural pork rind itself, just as plastic worms often take second place to pork eels. The pork rind has

a natural feel to it and, being animal material, also has a scent and a flavor that the fish can determine. Because of that scent and taste, even a single hook rig on the pork eel will result in more fish hooked, since the fish is more likely to hang onto something it can really taste, or grab it again if you accidentally pull the bait out of its mouth, than it is to keep clamped on a piece of plastic or cloth.

I experimented with a pork eel last summer on one bass, deliberately pulling the eel out of its mouth twice instead of letting the fish run with the bait. The third time the bass hit the lure, within the space of a single minute, he hooked himself since he hit the head, where the hook was located, to keep the "eel" from getting away again. And this was a supposedly wise old five-pounder, in a heavily fished lake.

Add a few jars of pork baits to your tackle box. As long as they are kept in the brine preservative, they will keep forever and will stay firm, and the next time the bass won't take a conventional offering, "let 'em eat pork!"

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Panfish know no season — go get 'em!
.....

Send the *Angler* to a friend!

(full details on page 27.)

PENNSYLVANIA

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SEPTEMBER—1976

Angler

the
Keystone State's
Official
FISHING·BOATING
Magazine...

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Single Copy



Our Heritage is in Jeopardy

Many Americans spent a great part of July 4, 1976 glued to their television sets watching Independence Day observances beamed in from all across the United States. Varying, naturally, with each locale's geographical heritage, these observances were reenactments of what today's people supposed our predecessors of 200 years ago looked like in the dress of the day and the spirit of each observance was to at least simulate the determination which must have been their lot for our nation to have survived.

Though we feared overcommercialization, from the hills and plains came demonstrations by Americans of a new generation who caught the higher vision and, with glowing pride, showed it with unrestrained enthusiasm.

Such involvement of the public in where we're going and what are to be our policies, although through a ponderous and sometimes most frustrating process, shows clearly that our system is good . . . it's working . . . it has been working for over two centuries . . . better than any other!

Henry Steele Commager, a distinguished historian from Massachusetts, has made a discouraging comparison of the goals of our forefathers with all too many of our present generation. Over and over, the men of revolutionary days used the word "posterity." The Constitution itself says, in part, "We the people . . . to secure the Blessings of Liberty to ourselves and our Posterity. . . ." With all they had to lose, those men who had the audacity to sign the great Declaration pledged their lives, their fortunes, their sacred honor — and in most cases forfeited them all — thinking of the future years. They weren't "living for today" — thinking only of those original thirteen colonies, but of far distant frontiers yet to be established.

It is painful to realize that a significant majority of our own generation no longer seems to believe sincerely in posterity, nor feels any genuine obligation to it. Although some of our not too distantly departed forefathers, thinking that American natural resources were infinite, exploited them — especially around the turn of the century, we have no such excuse. We know better. Yet what are we leaving for future generations? Irreversible damage to our rivers, lakes, oceans, our soil and air . . . the depletion of nonrenewable resources, such as gas and oil.

Some could not care less. Twenty years ago a vice president of a steel company told me, "Nobody left me any buffalo; I owe the future nothing!" That same company continues today to pursue a course of fouling the environment and then, using tactics bordering on extortion, adds to the plight of an already suffering economy by threatening to close down and eliminate the employment of thousands of people as they are forced to comply with environmental regulations! It makes you wonder. Is this the same America? Is this that "Posterity" of which our founding fathers dreamed.

Advocates of the power dams on the New River in Virginia and North Carolina are after short-term gains. National organizations of labor unions are lobbying for that sort of project for two thousand jobs that will last but a very few years — at the expense of an irreversible insult to that free-flowing river.

At a time when we have an energy shortage on one hand and the high price of coal on the other, our almost daily watershed protection confrontations with the strip mining industry are unpopular at best. The home builders, the developers, the subdividers, the land speculators — all are examples of people not much impressed with our heritage of over 200 years.

The big cars are still with us. The smaller, less wasteful models are slow in coming off the drawing boards, though each company offers at least one token "super economy" model to temporarily placate the concerned. "Top-of-the-Line" models will continue to roll off the assembly lines, gobbling up more and more precious, though relatively cheap, gasoline. Perhaps the new models will be smaller, but only slightly so.

Those of us in the renewable resources business, such as fish and wildlife management, have everything to lose from the exploiters. Those who back our efforts at every turn seem to be the most farsighted remnants of our forefathers. We are grateful for their support. We need *them*; we need *you*. We *all* want to save something worthwhile for posterity!



Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

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CONTENTS

Exploring the Juniata by David R. Thompson	8
Juniata River Musky Tournament by Waterways Patrolman Larry Baker	14
The Great Container Controversy by Bill Schneider	16
Trout Fishermen I've Been Caught With by Larry Servais	19
At Tidioute — Fishing is King by Bob & Lin Steiner	22
Through the Eyes of a Little Girl by Deputy Joanne Haibach	27

FRONT COVER:

There are days when Lake Erie's waters aren't fit for man nor boat but
there will always be one salmon angler who won't be denied!

Photo by Sam Hossler

BACK COVER:

In the diagonally opposite corner of the state the bass and panfish are
active enough to keep anglers hopping down at Marsh Creek Lake.

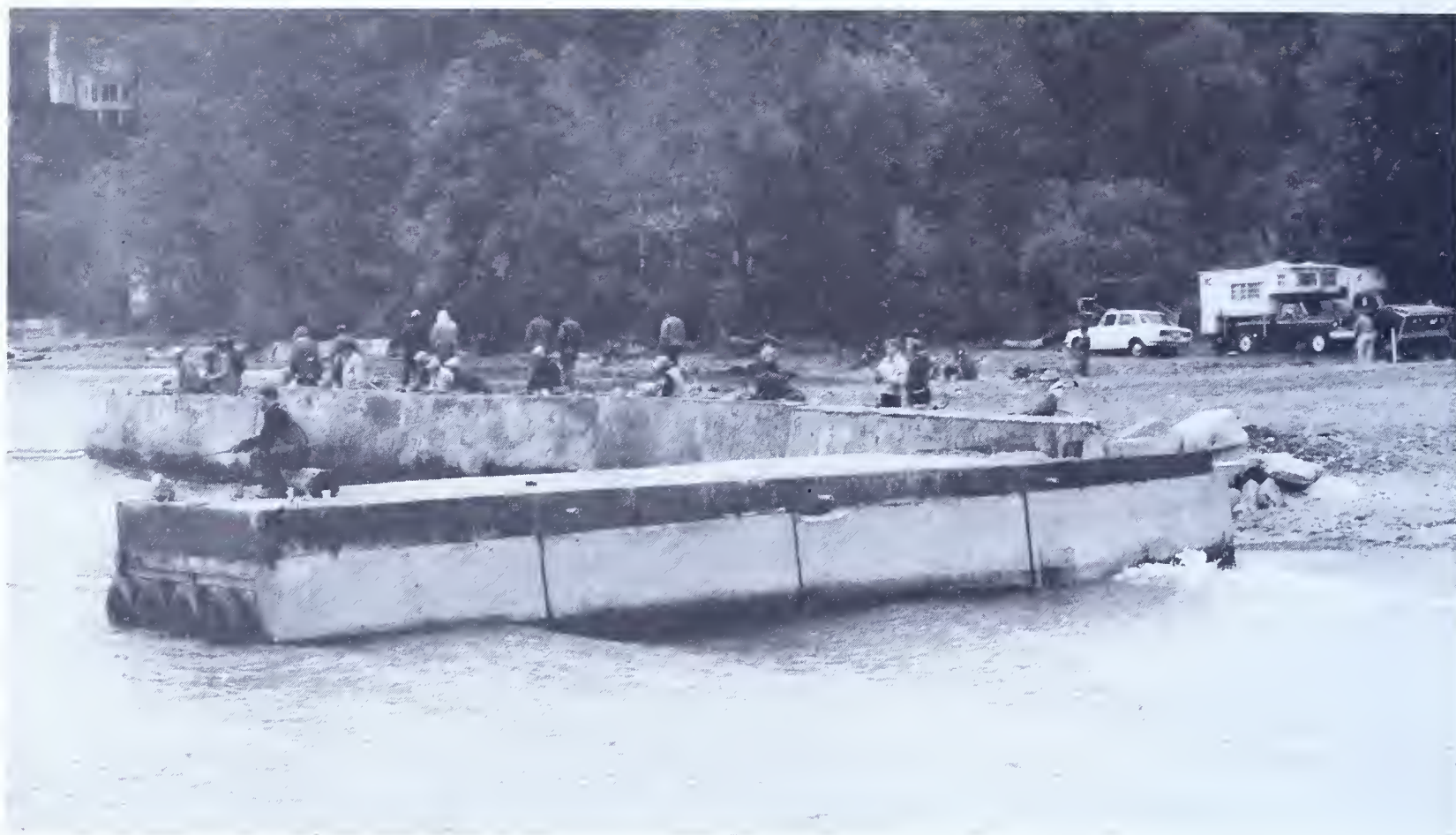
Photo by George E. Dolnick, Jr.

MONTHLY COLUMNS

FISHING OUTLOOK	2	ANGLER'S NOTEBOOK	14
LEAKY BOOTS	4	CO-OP NEWS	15
TAKING A CLOSER LOOK	6	STREAM NOTES	24
ASHORE & AFLOAT	30		

James F. Yoder, Editor

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The annual coho salmon, chinook salmon, and rainbow trout spawning runs trigger excitement at Lake Erie each fall.

fishing outlook

by george e. dolnack, jr.

During the dog days of summer now on the wane, many anglers abandon most of their fishing endeavors in favor of the pennant races and other passive activities. They have quietly slipped into the hot weather doldrums and think that our finny friends have done the same.

They are right to an extent, since the low and warm water with its abundance of aquatic plant growth doesn't exactly make ideal fishing conditions. But with some selective angling, there is plenty of action to be found all across the state.

Fish are a lot like humans when it comes to the weather. When it is hot we seek out the coolest and most comfortable spot we can find and stay there until forced to move for one reason or the other. And we are most active during mornings and evenings, the most comfortable times of day.

In a similar fashion, fish head for the cooler waters and shaded spots. They, too, stay put until the want for food urges them to move. They'll also cruise the shallows for a meal in the early hours and after the harsh rays of the sun have faded below the horizon.

Fishing this time of year, then, is most productive when your bait or lure is on the bottom or on top of the water. Just where you put it will depend on the species you are after and the time of day you chose to fish.

In lakes and impoundments look for fish in old stream beds, in submerged ponds, around bridge piers, stumps and fallen trees; near dam breasts, where the water is usually deep, and in the well-aerated, food-laden tailrace.

Drift fishing a minnow off the lake

bottom is almost a sure fish catcher. Try this or a Dixie type spinner baited with a night crawler for walleyes. Quarter or three-eighth ounce jigs worked off the bottom while being pushed along by the wind also produce catches of this tasty fish.

Remember that walleyes travel in schools. Where you catch one, there are bound to be others. So when you connect, cover that particular area well by anchoring or drifting over the same spot again.

Minnows or a single hook spinner with a crawler and drift-fished also works for largemouth bass. Surface lures fished in the shallows during early morning or evening are also effective.

In our rivers and streams, concentrate on the deep pools and riffles. Minnows or any lure resembling one will take most game species.

This is also a good time for a float trip if you don't mind dragging your raft or canoe over the shallows occasionally.

Trout fishing in hot weather when the streams are window glass clear always presents a real challenge.



Southeastern Pennsylvania anglers, far removed from Erie's "salmon fever," find contentment on the Schuylkill River.

That's why our trout waters, including the FLY-FISHING-ONLY areas are practically deserted this time of year. The fish spook easily and turn their noses up at darn near everything cast at them.

However, there are several things you can do to give you an edge. Keep the streamside vegetation between you and the water to avoid scaring the fish. And make your approach silently since the fish can sense the vibrations from each noisy step you take.

The summer sun can also be made to work for you instead of letting it impair your vision. If you look at the water with the sun in front of you, it's almost impossible to see any detail unless you move your eyes to one side or the other. However, if you look at the water with the sun behind you, all details are sharp and clear. With this in mind, think of a fish's vision being affected in the same way.

The idea is to place your back to the sun so you can see the fly clearly while the trout can't. When you do this, there will be a certain area or "window" in which the fish will be dazzled by the sun. This will make

your fly appear more natural as the trout goes after it with reckless abandon. Give this a try while fishing for other species as well.

Now here's the best news about September fishing and we've saved it until last. The annual drama of the salmon spawning run that provides Pennsylvania anglers with the ultimate thrill is now unfolding on Lake Erie.

Fishermen out for salmon can expect to take coho up to 31-inches long and chinook up to 39¼-inches. If anything larger is caught, and there is no reason to expect otherwise, then a new state record will have been set.

Fifteen pound test line is recommended for the salmon which go for fluorescent colored and flashy lures. Conventional tackle will do but a big landing net is a must.

Though many salmon anglers fish from boats, an equal number or more fish from the lake's shoreline and in the tributaries where permitted.

An added bonus for the salmon fisherman are the huge lake-run rainbow trout that are also caught in good numbers. Anglers entice them

with salmon egg sacks about the diameter of a nickel.

To make them, take a piece of cheese cloth about three inches square and place the salmon eggs (the bottled variety will do) in the center. Then pull up the corners and twist until the sack is firm. Tie off with thread or thin string, cut off the excess cloth and you're in business.

Bury a #6 or #8 hook in the sack and fish it on the bottom. When a rainbow grabs it, set the hook and hold on for an unforgettable experience.

It is recommended that first time salmon anglers start off at the Fish Commission's Walnut Creek Access Area which is considered Lake Erie fishing headquarters. Here, additional information on salmon fishing can be picked up which will increase the chance for success.

Since the salmon run can be turned on or off by the weather, a coho hotline has been provided by the Fish Commission for the angler's convenience, especially those who have a great distance to travel. The number to call for current information on weather, water and salmon fishing conditions is (814)-838-3424.



NEW APPROACH!

Dear Mr. Abele:

"I have a suggestion for increasing funds for the Commission's general fund without rancor or hostility. Some of us are willing to pay more for a license — not because we are reckless with a buck, but because we are deeply concerned that the Commission continue solvent. It is this: let those who may wish, buy a special license directly from your office, for say, \$25.00, and let that license show it's point of origin and why.

"No special privileges of any kind, on the contrary, those of us who feel this way should make every effort to be an example. Some of us are proud of the Pennsylvania Fish Commission."

DON STUTZMAN
Johnstown

LITTLE SCHUYLKILL, TOO

Upon reading the June 1976 issue of the Angler we came across the article in the Leaky Boots section about the Schuylkill River coming back. Well, we sure hope so! In fact, we formed a club called "The Little Schuylkill Conservation Club" of Tamaqua, Pa.; and, so far we are working on a nine-mile stretch of the river. We put in four diversion dams, and already have 2435 fish in the river as of May 27. Our club is now 38 days old with 209 members. Our goal is 10,000 fish by the fall of '76. We are hoping we can get the Fish Commission biologists up here next year (1977) to test our water just to see how far advanced we are in our project and to let us know what else we have to do to get the fish trucks in our area of the Little Schuylkill which runs into the Big Schuylkill in Berks County. So again all we can say is, "Yes indeed, the *Little Schuylkill* and the *Big Schuylkill* are coming back!"

RAY RIPKO
Tamaqua

Well, congratulations to the L.S.C.C., Ray. ". . . Way to go!" We're certain that when the time comes our biologists will give your efforts serious consideration. But — and that's a big "But," don't get too "trigger happy" about getting

those fish trucks in too soon. If the water is right your fish will thrive. Fish trucks have been known to deliver more to an area or waterway than fish alone. But, as mentioned, our boys in Fisheries can and will make those decisions when and if that time arrives. Ed.

DEEP FRIED TURTLE —

On reading my *Pennsylvania Angler* for June, I see in "Leaky Boots" where the "Ed." said he wouldn't touch that turtle stew. Well, I believe he has never cleaned nor seen one cleaned (*Editor's Note: Right you are!*) because you do cut the head off and let it bleed out (tie it with rope by back leg and hang it up). Then, put the whole turtle in scalding water (shell and all) and let in water about 5 or 10 minutes. Then, take out and get a good stiff scrub brush and really scrub the whole turtle, shell and all. By the way, when that is done the turtle will be really clean, in fact, white — shell and all. Then, pull toenails out and cut shell away (I don't forget to get all that white meat from back of shell), then, parboil until meat is tender, take meat out and skin it, put skin back in the broth and deep fry the meat and use the broth for stew.

Really, it is the same as if you were going to pluck a chicken. You don't gut it before you put it in scalding water either. That way you have deep fried turtle and can make your stew from the broth. Really good eating.

E. M. FASICK
Altoona

P.S. Someone goofed on page 2 in "*Fishing Outlook*" as it says bass opened on June 14. I thought it was June 12. Thank you.

Sorry about the "goof," E.M. We sincerely hope that we didn't deny any of our readers those extra days of bass fishing with the oversight. About those turtles: give me time! I've skinned most every Keystone State fish that swims, and everything from rattlesnakes to skunks — deer and bear included — I'll get to turtles *someday*. When I do, you'll hear about it. Ed.

TURTLEBURGERS —

To Jon Stamberger:

The following is some turtle preparation information. I have cleaned and prepared a few turtles. They make a delicious soup and the meat ground will make turtleburgers by adding a little pork. The meat is quite stringy, therefore the grinding.

Cut the head off and hang the turtle up

to bleed well. The turtle is of the reptile family and does not die until the sun goes down. Anytime after that lay it on its back and cut the shell off on the underside. The entrails are exposed and easy to remove. With a sharp knife split the legs to the toes and remove the legs. Cut off any other meat. Soak it in a light salt water with a tablespoon or two of vinegar. That you can let stand all night. Then boil it (do not add salt) until the meat is tender. Then, grind it with the course blade and add a little seasoning to taste for burgers.

The soup I make like clam soup. I use small diced potatoes, onions, a little celery and plenty of hard-boiled eggs. Don't make the soup thick. You will find this information very helpful from one with much experience in preparing the lowly turtle.

This may seem a long way around but you will find both the burgers and soup very delicious. Don't let the term reptile bother you. Onions added to the meat for burgers will add to the taste. Good Luck. Please excuse all misspelled words. I am 84.

SAM D. RUCH
Selinsgrove

??? Which misspelled words, Sam? We failed to notice any. Furthermore, there are thousands of us out here hoping we'll be given the opportunity to be around at age 84 to misspell a few! CONGRATULATIONS! Ed.

TURTLE & NOODLES —

I read in the June issue that someone wants to know how to clean and cook a turtle. Cut the head off and then scald with boiling water — same as a chicken. Then, pull off all the skin and toenails. With a sharp knife, remove the bottom shell from the belly. Then you just keep on cutting close to the upper shell — like you would skin any other animal. Cut in pieces and let stand in salt water overnight. Cook same as chicken. It is very good with homemade noodles.

W. T. LOWMASTER
Rossiter

TURTLE BARLEY SOUP —

So you want to cook a turtle. First you have to kill him or her. Turn it on its back. When it sticks its head out, try to cut its head off with an ax or hatchet whichever you have handy (*Editor's Note: I told you sometimes the details are gory!*). When you have succeeded, and don't forget this, I have seen this head clamped on a broomstick 24 hours after the head was cut off! Now for the soup. Place the turtle in hot water. The

outer shell and skin will peel off and it will look pinkish white. Cut the side bones of the shell which will open it up — the turtle, I mean. If it is full of eggs, you can discard them or you can cook them and eat them. Some say they are delicious. Don't throw the top of the turtle away. It's full of meat. Cook it with the rest of the turtle. When the turtle is cooked, you can take the meat from the bones. Grind it up or serve it cut up. Now throw all kinds of vegetables in the broth — everything but the dishrag — and let it cook. Some cooks add some beef for extra flavor, but I always have my barley ready which is the secret of turtle soup. Hope you like my way of making turtle soup.

CHARLIE BLOAM
Johnsonburg

Glad you left that dishrag out, Charlie! Ed.

THE "ULTIMATE" —

I have nothing but praise for the Pennsylvania Fish Commission. All of their projects, or at least the ones I have come in contact with, have been excellent. From the stocking of trout streams to patrolling our inland waterways or even protecting our ponds and impoundments, I think they have done a beautiful job.

Now, they have come up with the ultimate, the Book on Basic Boating. This book is one of the best ideas I have seen in a good many years. I am 62 years old.

The facts presented in the book, if digested by the reader, are a treasure. As for the questions and answers, I would like to make the grading process a must to all boat owners. Keep up the good work.

Truly a Commission Fan
NATHAN ANDERSON
Bellevue

SHINERS "ON THE ROCKS"!

A local man came into our bait shop and requested one dozen redbins. I told him we didn't have them. He said, "OK, give me a dozen shiners." He took them home and I found out later that he put them in a jar of red Cool Aid overnight! When he woke up the next day, they were all dead . . . he couldn't figure out why!

CARL G. WEAVER
Montoursville

LOOK FOR GRANDMA —

The first time I ever saw Koon and Gordon Lake was at 3:00 a.m., night of a

full moon, looking out over the "wide waters" from the old stone bridge. That sight has never left me and even though I travel over a 100 miles each way to get there. I make that little jaunt many times a week — if only for a couple of hours. This is really "God's Country," and I have met some wonderful people here such as the most gracious late Bill McIlnay. But, just like the Garden of Eden, there is a *serpent*. The irresponsible so-called "sportsmen" who litter and break the rules. I am a widow and have asthma very badly; but, because of years of "picking up," I carry a litter bag and continue to "tidy up" as I go along. Even though my catches have not been spectacular, someday I'll run into a citation fish. I know they are there. My compliments to the Fish Commission for their efforts in trying to keep this facility open. I know it is an enormous and thankless job. But keep up the good work.

Now thank you very much for reminding me about my subscription; the time goes so fast. I'm hoping to meet your new Waterways Patrolman. Tell him to look for "Grandma" at the perch hole at the entrance of Evitts Creek into Koon.

PHOEBE GUMBERT
North Versailles

HELP!

I am twelve years old. I need help! I can't even catch a sucker. I've been told so many things I don't know who to listen to. My father and I can't even feed the fish. All I have to say is HELP!

CORA SHIELDS
Edinboro

Good gracious! How about somebody up there in Edinboro running over and giving Cora and her dad a hand! Ed.

GRATEFUL —

I'd like to take this opportunity to publicly thank Waterways Patrolman Paul Hornberger and Deputy Joseph Waybright, of Lebanon County, for recovering my fishing boat within 24 hours after I reported it stolen. Great work fellows, and thanks again!

DANIEL BALDWIN
Palmyra

WON'T QUIT!

Since I like fishing more than I like to eat fish, I spent the time between sunup and almost eight o'clock on opening day for trout, fishing my favorite stretch of the Maiden Creek (Berks County) which is about eight miles from the upstream area which is stocked with trout. A lot of "fishermen" proceeding to the stocked

area must go right by the warmwater area I was fishing. I was highly amused at the large number of drivers that honked their car horns at me and pointed to their wristwatches to inform me that "fishing season" hadn't opened yet. Cars slowed down when they saw me playing or taking a fish from my line. I wonder how many guys were angry at me for catching my "limit" of *fallfish* before the season opened.

Later, when I joined these "fishermen" for the start of "fishing season," I really got some danders up when I caught and released two 15-inch rainbow trout before 8:05 a.m.

It was the same type of dim-witted nincompoops that caused me to stop hunting in 1962, but I'll be damned if I'll stop fishing. After about an hour of getting lines tangled and elbows by someone else trying to catch their fair share of fish, I packed up and proceeded to the FISH-FOR-FUN area of the Little Lehigh to join some *real* sportsmen for some real trout fishing.

RICHARD BAKER
Reading

HOW COME?

I've been trout fishing for about seventeen years. Three years ago I gave up worms, salmon eggs, and other such baits to become a fly fisherman. I really can't complain about the number of trout I catch with only three years' experience under my belt.

The problem is the size of fish I've been catching on flies. I can't seem to find an answer as to why the trout I catch on flies are usually much smaller than trout that are caught on bait.

Several of my fly fishing friends are having the same problem. Why do the larger trout prefer bait over flies? Do all hatchery-raised trout act like this? I would appreciate an answer if you could give me one.

GARY DAVIS
Erie

Although the possibility of you having such a "freak streak" does seem remote, we can't help believe that such is the case. It's an accepted fact that large minnows, especially when fished early morn or late evening, will entice some of the larger browns. But, we have documented evidence of some of the largest trout you could dream of being caught on flies — and some of the smallest of sizes at that! Perhaps some of our readers have a better answer. If so, we'll be hearing from them. Ed.



The rainbow trout is spotted and has a rosy hue along its sides from the head to its completely spotted tail.

Taking A Closer Look

by Tom Fegely

THE RAINBOW TROUT

Most anglers are surprised to learn that there are no trout native to Pennsylvania. The brook trout, commonly referred to as a "native," is technically a member of the CHAR clan, even though it has all the trout features. The brown trout was introduced from across the Atlantic and the colorful rainbow was brought here from its original range along the Pacific Coast from Mexico north to the Aleutian Islands of Alaska.

The rainbow trout with which most Pennsylvania anglers are familiar is actually the nonmigratory phase of the "steelhead." Originally, the "steelhead" was classified as a separate species from the freshwater rainbow. Today, though, the two are known to be one and the same: *Salmo gairdneri*. However, "steelhead" persists as a nickname

in many areas.

Actually, the term "nonmigratory" does not adequately fit the rainbow. Even though it is used to distinguish the ocean-going "steelhead" from the fish we Pennsylvanians know, all rainbows are essentially migratory. A natural spawning population has developed in Lake Erie and several of its tributaries up which the rainbows run at breeding time. Other lakes throughout the state also have populations of rainbows which instinctively head toward tributary streams where possible.

(Editor's Note: Lake Erie's migrating rainbow trout can be counted on to reach greater lengths and weights than those in our inland streams and lakes, having gorged themselves on Erie's abundant forage fishes. To eliminate the resulting inequitable competition, Lake Erie's migrating rainbow trout are referred to as "steelhead" trout, a separate category in the Fish Commission's Citation program.)

The rainbow is widely stocked throughout Pennsylvania and can survive in lakes and ponds too warm for brown trout. Though less a surface feeder than the brownie, the rainbow is widely recognized as the greatest surface fighter of the salmon family. When hooked it immediately leaps into the air — the larger ones literally tail-dance across the pool's normally calm surface.

Spring and fall are generally the most productive periods for catching rainbows. From April through early

June and then again in September they can be taken on worms, flies, streamers, minnows, and spinners. Fisheries biologists hold that rainbows do not feed on their spawning runs. Nevertheless, they do take baits and artificial lures with seemingly ravenous delight at this time.

The Pennsylvania rainbow is normally a March-April spawner although fall spawning of hatchery stock does occur. The preferred spawning site is a fast riffle over a gravel bottom. Here the female digs out a nest with powerful thrusts of her tail — once assured that her choice of locations will guarantee a nest with plenty of oxygen and relatively free from the danger of silt deposits. When she is ready to shed her eggs the male draws near and ejects a cloud of milt into the water. She then moves upstream, excavates a new nest, and the act is repeated. The gravel from the upstream nest washes down and over the previously built nest. Before she completes her spawning, other males may attend her and fertilize anywhere from 600 to 6000 nonadhesive eggs.

To an observer, the cloud of milt deposited into the flowing water by the male may seem to be an inefficient way of fertilizing the eggs. Yet, studies show that better than 98 percent of the eggs do get fertilized and at least 90 percent of the spawn becomes covered by gravel and protected until hatching time.

In 50° water the eggs hatch in

about 35 days. Despite the high percentage of spawning success, remarkably few of the young trout survive the rigors of freedom. Other fish, snakes, birds, turtles, and a myriad of other predators eat them — as may their own parents. Of 5000 fertilized eggs, perhaps only one will mature to reproduce another generation. But then, nature has operated under the “survival-of-the-fittest” policy for eons of time with relative success. Of course hatchery raised fish have a much higher survival rate due to the sheltered lives they lead.

Within six to eight months the young trout grow to fingerling stage. By the second summer they attain a length of about six inches on a diet of insects, crustaceans, worms, and small fish. The rainbow seems to develop a taste for minnows at an earlier age than does the brownie.

Although the rainbow trout is to-

day a well respected fish here in the Keystone State, this was not always the case. Back in 1883, the “McCloud River Trout” of California was planted in the state’s waters because of claims that it *“was of much more rapid growth than the native brook trout, and in point of vigor and strength far superior to it.”* By 1914, however, the Fish Commission was no longer rearing the rainbow trout as both anglers and biologists disbelieved the claims made about it.

After World War I another attempt was made at stocking rainbows in Pennsylvania lakes and streams. Again the project failed because the strain used came from the cold, snow-fed streams of California. In 1933, Earl Kline, an ardent fisherman from Centre County, planted some fingerling rainbows in tributaries of Spring

Creek. Within a year they grew to 10 or 12 inches and the Fish Commission once more made an attempt at establishing them . . . this time with domestic stock from a private hatchery in New England and from a federal hatchery in Virginia. The resulting fish were more adaptable to Pennsylvania’s hatcheries and waters and the rest is history.

There is little natural reproduction of rainbow trout in most Pennsylvania waters except in the tributaries of Lake Erie and portions of southcentral Pennsylvania. Despite this, these rose-sided fish have earned respect as a “put and take” species.

Rainbows are not “experts only” fare. Kids with worm-baited hooks, fly fishermen, and the patient minnow fishermen all have an equal chance at hooking this whitewater acrobat: the rainbow trout.



The appropriately named fingerling rainbow, above, is seven months old. From such tiny youngsters grow trophy fish like two Allentown youngsters are holding, below. Deron Erney, of Coopersburg, caught that king-sized rainbow trout, right, on a nightcrawler.





Exploring the Juniata

by David R. Thompson

Beneath the bridge that spans the Juniata River at Mifflintown live hundreds of pigeons that had gathered on this rainy evening to await the dawn. Suddenly two drenched fishermen traveling by canoe startled them and in a roar of wind, stirred by countless wings, the birds flew wildly from their haven to circle time and again over the bridge. Looking up from our canoe and searching the dim corners of the bridge for nests, I wondered how many squabs had fluttered into the river to be gobbled up by muskellunge. I knew it was quite possible that a huge fish might at that very moment be lurking in the river as it flowed through the county seat of Juniata County.

An hour before, my father and I stood in a drizzle beside the river at the Fish Commission's Mifflintown Access, watching dark clouds drift slowly out of the west. The forecast was for more wet days ahead. We knew it wasn't ideal weather to embark on an overnight canoe trip,

but when the drizzle stopped we launched the loaded aluminum canoe and dug deeply into the river with our paddles.

In minutes we arrived at a deep pool and lingered to fish it. I had purchased a couple of three-inch, red-finned rubber minnows that produced well on previous Juniata excursions and began fishing with one. We were in the process of discovering the secrets of the pool when it began raining again.

Dad reached for his rain jacket and looked back upriver to where my car was parked about one-quarter mile away. I waited for him to suggest that we turn back. Instead he picked up his paddle and proposed that we try to outrun the rain. *"It'll get dark early tonight. We ought to try to make camp while there's still enough light to see what we're doing,"* he said.

With these words we proceeded down the Juniata . . . we were committed.

Approaching a large island, we

elected to follow a narrow channel on the north side that swept past Mifflintown. Through the rain, fog, and fading light I saw kitchen lights in homes that stood not far from the river. We passed a sunken rowboat tied to a sycamore and car tires discarded in the water. Each time we approached a hollow tire I felt an urge to cast the minnow into it, thinking a smallmouth or rock bass could be hiding in the opening. But I had tried tire fishing before and not caught a single fish. *"Littered tires are useless,"* I mumbled.

It was six o'clock and a light rain persisted. I thought about the families in Mifflintown in their dry, warm houses eating hot suppers . . . then watching the evening news. Somehow the day's events that were certain to make headlines now seemed meaningless. We were drifting with a river that had flowed perhaps forever . . . we were part of it, part of the natural world of rain and dark skies and forlorn riverside trees with exposed roots growing in

Ray Stydinger of Thompsontown casts a favorite Rebel into a Juniata River eddy for muskellunge. Stydinger, whose largest Juniata muskie was a 44-incher, is convinced the river holds some 50-inch muskellunge.

mud.

Along the bank ran a narrow channel a few feet deep with branches hanging above it. *"That's the kind of place I like to fish,"* I told Dad. *"Let's stop paddling and cast toward shore."*

In the next ten minutes we caught three legal smallmouth bass. The rubber minnow was perfect for this particular water. Being lightweight, it drifted just beneath the surface and I didn't have to "work" it to keep from hooking on bottom. When I twitched the rod tip, the minnow reacted with lifelike movements and the bass loved it.

Having fish on the stringer lifted our spirits. At least we wouldn't starve. Ahead was the end of the island and below it the Route 35 bridge. We were about 75 yards up-river from it when the rain descended harder than ever. We responded with vigorous paddling to reach the shelter where we stopped to dry our faces and decide the best course of action. That's when I considered the possibility of a musky living under the bridge to dine on unfortunate squabs that lost their footing.

Muskellunge fry were introduced into the Juniata River by the Fish Commission in 1965 and have become reasonably plentiful in the past decade as a result of an ongoing stocking program. So plentiful that, in September, 1975, the Juniata Jaycees conducted the First Annual Juniata Jaycees Musky Tournament. A total of 12 muskies were caught during the weekend tourney, the largest being a 39- and one-third-inch fish tipping the scales at 18½ pounds.

As we waited under the bridge for the downpour to subside, I remembered what Ray Stydinger, a successful musky fisherman from Thompsontown, told me. *"I'm certain there are some 50-inch muskies in the Juniata. It's only a matter of time until one is caught,"* he said.



His largest musky was a 44-incher weighing 21 pounds, while Bob Cook, of Lewistown, has taken one 45 inches. Both men assisted Waterways Patrolman Dick Owens in planting the musky fry in 1965.

Stydinger offered some proven advice about where to look for muskies in the Juniata. *"I've found that in winter the best places to find them are in the eddies and at the mouths of creeks. Also, any calm water (or backwater) anywhere along the river is potential musky territory."* He uses five- and one-half-inch Rebels or other similar size lures to catch muskellunge.

In summer, muskies are harder to find. *"A musky might be found almost anyplace and are often located in water only three or four feet deep,"* he said.

Then Stydinger added another observation. *"You know, we used to think that muskies were loners. Well, that's not so. Here in the Juniata we've been seeing them in groups of four and five."*

Although muskellunge are apt to be caught practically anyplace in the river, a number of spots have produced for anglers time and again. Places such as the PFC Greenwood Access, mouth of Cocolamus Creek, below the Route 333 bridge, Shaffer's Eddy, Muskrat Springs, mouth of Tuscarora Creek, PFC Mifflintown Access, between the mouths of Kishacoquillas and Jacks Creeks, the Bridge at Lewistown, McVeytown and the PFC Newton Hamilton Access.

Night was fast approaching on the river with no indication that the rain



would quit. We were forced to leave our steel sanctuary and search in earnest for a suitable site to pitch my small two-man tent. During previous overnight trips on the Juniata I'd discovered that ready-made campsites were limited; so, we anticipated having to sleep at what would be considered a poor one.

The south side of the river is bordered in many stretches by a railroad. However, there are numerous places to camp along shore where woodland separates the railroad from the Juniata. The north side has a number of communities, many residences and other private property where it would be proper to camp — but only after obtaining the landowner's permission.

In order for us to establish a camp quickly, it was necessary to carve a campsite out of brush and rocks. Dad said, *"I'm glad we've got good air mattresses. My back isn't accustomed to a bed of rocks."* I didn't mention that both mattresses had slow leaks. He'd learn about that soon enough!

Besides basic angling equipment, our gear included the tent, sleeping bags and air mattresses, a two-burner gasoline stove, ice chest, food box, change of clothes, life

jackets, ax and photographic equipment. All of this made quite a load which was covered with a plastic tarp, an item that we found to be essential.

Our camp was near the first bend in the river below the Route 35 bridge and was one of the nicest stretches of water we covered. That evening, as we ate a supper of sandwiches, fish were rising nearby. Dad was eager to wet a line and started wading with a corned beef sandwich in one hand and his rod in the other. Suddenly, I heard a splash and looked up to see that he had slipped on a rock and fallen backwards. Since he was already wet from rain the dunking hardly mattered. What upset him was losing a good corned beef sandwich that floated in a soggy mess beside him!

In darkness I waded upriver to a large submerged rock that I had spotted as we floated toward the campsite. My second cast below the rock was struck hard. What I thought would be another bass was a seven-inch goggle-eye that had a crayfish stuck in its throat. Why the rock bass felt a need to hit my lure with a perfectly good meal already in its mouth was a mystery to me!

The entire Juniata provides fishing

for this panfish. Two years ago my wife and I floated from Thompsonstown to Greenwood and caught numerous rock bass, many of them, six or more inches. Compared to a bass or musky, a rock bass isn't very impressive; however, a six-inch rocky has plenty of spunk and provides a good chunk of fish for the pan. Small spinners, rubber minnows, or other small lures, as well as worms and hellgrammites take a good share of Juniata rock bass.

The rain slackened off as we fished, but while I inspected the gluttonous goggle-eye, the heavens sent down more of it. Our tent was the only dry place nearby and we crawled inside to shed soaked clothes and crawl into our bags for the night. The relaxing sound of rain pattering against the tent was shattered repeatedly by a voice from a loud speaker at some Saturday night shindig.

In 1849, a 61-mile section of the Pennsylvania Railroad opened from Harrisburg to Lewistown. Part of it was across the river from our tent and that night several trains rumbled upriver. In the wee hours of the morning, a train stopped nearby and hissed hot air and moaned and groaned for about 15 minutes before

Anchored close to shore below a Juniata River pool, this trio of fishermen appears intent on catching fish. Dad and I drifted past their fishing site on our way toward Muskrat Springs.

Author's father, Dr. David I. Thompson of Carlisle, cooks bacon and eggs at a far-from-ideal campsite selected at nightfall along the Juniata River just below Mifflintown.



leaving us in peace and quiet.

Miles west of our campsite at Ardenheim, Huntingdon County, the Juniata River was formed by the confluence of the Raystown Branch and the Little Juniata River. From there it flows east, then north and eastward again for about 90 miles until emptying into the Susquehanna River below Amity Hall.

The Juniata is not large, compared to the Susquehanna. During summer and fall the Juniata could be described as tame — with an average depth of three to four feet. Some spots, however, are as much as 15-foot deep with many smaller holes of about six feet.

Summer and autumn are the best seasons for floating the river. At these times, the Juniata is smooth-flowing and interrupted by only gentle rapids that present no serious threats to alert boaters. Because it is gentle, except during high water or flood conditions, the Juniata is ideal for almost anyone to float who knows the fundamentals of safe boating and canoeing. Each summer the river's popularity for canoe tripping is evident by the many groups who frequently use it. No doubt few realize that the river was declared a public highway by the Provincial

Legislature in 1771.

The Fish Commission maintains nine public accesses on the Juniata. The westernmost ramp is known as Point Access, near Ardenheim. From there to the Newton Hamilton Access is about 15 miles of good floating and fishing water. Downstream to Granville is another 20 or so miles, and, to Mifflintown Access, another 20. The serious fisherman who likes to linger at the good holes will allot three days to float each 20-mile stretch.

From Mifflintown, where we began our float trip, to the Walker Access is approximately five miles and can be covered easily in a single day. Muskrat Springs can be reached by another five-mile float, with still another five-mile journey to Thompsontown and the noted musky hideout below the bridge.

The next to last access is Greenwood, located about eight miles from Thompsontown. Between Greenwood and Amity Hall flows 12 miles of scenic river with the Susquehanna River only a short distance away.

I was surprised at daybreak to hear Dad comment that his back felt fine. *"I had a time trying to fit between the rocks under my sleeping*

bag though," he said. *"There was a big one right at the small of my back."*

I knew exactly what he'd been through. I'd spent the night on my right side to avoid a ridge of rocks high enough to satisfy a skier.

Poking my head through the tent door, I saw a river shrouded in mist with gray skies above. I couldn't believe it wasn't raining.

We set the stove on a flat rock along the river and started to fry bacon and boil coffee water. With the coffee cooked and warming my innards, I began to feel almost cheerful when a demoralizing thing happened — it rained!

I scurried to put away the bread and other food while Dad stood sipping his drink and watched the rain fall on the smoking bacon. *"Rain won't hurt it,"* he said, *"it'll evaporate as soon as it hits the pan."* I figured Dad was either darn hungry and would eat even soggy bacon; or, overnight he'd adopted a tough philosophy to see him through a tough float trip.

By the time the bacon was crisp the rain had stopped. We hurried to fry eggs before the weatherman changed his mind. Then we discovered that the spatula had been



Author's father admires a stringer of smallmouth bass and rockbass taken from the Juniata River above Thompsontown. Most of the fish were caught on a red-finned rubber minnow.

forgotten. I rummaged through the gear to find something thin and flat that would turn an egg. Nothing! So, I improvised by tearing a paper plate into a wedge. Some spatula! The egg yolks broke during transfer from pan to plate but we didn't care . . . they tasted fine anyway.

Early rising fishermen were already on the river by the time we broke camp. It was Labor Day weekend and we expected to see quite a few others on the river — *if the weather cooperated!*

And the weather did cooperate — at least for the morning. We soon floated into an area containing six boats and canoes. I saw a man and a boy in another canoe loaded with camping gear, and we paddled close enough to photograph them and introduce ourselves.

"How'd you fellows make out last night in all that rain?" I asked.

They explained how they had stopped to ask a landowner for permission to camp on his property and were invited to spend the night in an empty cottage. Naturally, they jumped at the offer. It was a good example of sportsmen being rewarded for having the courtesy to

ask permission to use private land.

They were fishing with surface plugs and having good success. They'd caught several smallmouth, 16- to 18-inches, plus quite a few small ones. The Juniata yields an impressive number of smallmouth in the 16- to 18-inch category. Larger specimens up to 22-inches aren't uncommon either. The majority of these bigger bass, however, seem to be caught by anglers familiar with the river, such as Ray Stydinger. Last fall he took six smallmouth that were all dandies. "*They were so nice that I released them!*" he said. Stydinger used soft-shelled crayfish to catch the bass.

History does not identify the first humans to travel the river or what means of transportation they used. Packet boats, rafts and arks used by white men were not the original crafts on the Juniata. So far as is known, the Indians were first to float the river in canoes. Indians such as the Andaste tribes including the "Standing Stone" Indians who lived along the river until being exterminated by the Iroquois, or Five Nations. Later, in the 1700s, the Tuscaroras, Shawnees, Delawares

and Conestogas were among the redmen to pass along its shores.

The word "Juniata" has its roots with the Indians of the Six Nations; however, its exact meaning is not known. "*History of Perry County*" states that Professor A.L. Guss, a student of Indian legends and traditions, believed the name Juniata was derived from a word meaning "stone" and another meaning to be "upright" or "elevated." The word is also associated with an Indian village known as Juniata, on Duncan's Island which existed at one time because the Juniata joined with the Susquehanna at two places: Besides the existing confluence, there was another channel at the north end of the island that joined the Susquehanna. That channel, however, has been filled in so that today no island actually exists. Nevertheless, the area continues to be called the "Island" and Indian artifacts are still frequently found there.

Dad and I stopped below the Walker Access to cook a dinner of fried ham and home fried potatoes. Delicious! If it rained as we ate, we didn't notice it. By now we were

seasoned rivermen who adjusted to the elements unconsciously.

Afternoon found us coursing downriver to reach our destination at Thompsontown by early evening. We paused to fish the stretches of water that looked lucrative and paddled over long stretches of slow-moving river where we seldom coaxed fish to strike.

It was that kind of deep, slow-moving water found at the Greenwood Access where we once watched a four-point buck swim across the river and pass within 25 yards of our canoe.

Approximately a mile upriver from the Newport bridge one can still see the remnants of stone fish walls hand-built in the river near the turn of the century. Percy Beatty, of Newport, said the walls were among the first to be built in that section of the river. The one-tier structures can be seen from old Route 22 when the river is low.

Beatty explained that the purpose of the fish walls was to guide fish

into a fish basket where they were trapped and then raked into a boat. The baskets were used only during the fall when the water was very low and there was heightened activity by many species of fish — especially eels.

"The biggest eel catch I remember was made by two fellows who filled six barrels," Beatty recalled. "They had a shanty with a heater and every hour or so they'd check the baskets. Their big catches were made after the river started rising."

Beatty, 71, who fishes the Juniata for muskies every chance he gets, said the eels were sold for about 10 cents per pound, "in the rough," and 25 cents per pound "dressed."

At the end of the canoe trip author paddles into shore at the Thompsontown Access just as another shower begins. The poncho that covers camping gear in the canoe proved to be worth its weight in gold.

A Newport restaurant operator bought the big eels and baked them for his customers.

The Juniata River is rich in history of fish walls, ferries, canals, boats and Indians. Even now the river continues to make history in the minds of modern anglers who have come to recognize the Juniata as an excellent fishery. It was the possibility of catching a musky that kept Dad switching from one lure to another as we drifted within sight of the access where our trip would end.

Then, above the Thompsontown bridge, I spotted a pretty channel of deep water between two weed beds and cast the minnow into it. The lure had hardly begun to sink when a fish rushed from its hideaway and grabbed it. I witnessed the strike and knew the fish was not the lunker smallmouth I hoped to catch to conclude the trip in style.

Moments later a volley of rain began to pelt the river. "Guess what," I said to Dad, "looks like it's going to rain for a change!"



JUNIATA RIVER MUSKY TOURNAMENT

October 2nd & 3rd

by Larry R. Baker,
Waterways Patrolman

Muskellunge in the Juniata River? You bet there are; and, some real trophies at that. Last year the Jaycees in Juniata County came up with the idea of a musky tournament on the river and over two hundred anglers from as far away as Philadelphia and Pittsburgh participated in the two-day event. The prize winning fish last year measured just under forty inches and the winner was awarded a twelve-foot boat with a seven and a half horsepower outboard.

At the rate Juniata muskies are growing, this year's prize winner should be much larger. And, so are the prizes!

FIRST PRIZE: \$1,000

SECOND PRIZE: \$500

THIRD PRIZE: A deluxe graphite rod and reel outfit valued around two hundred dollars.

BONUS PRIZE: A "mystery fish," of a species readily caught on musky tackle, will be tagged and released somewhere in the Juniata just prior to the contest. The angler catching *this fish* will have his choice of a Ford XLT Ranger pickup or a fully equipped Ford Granada! (That small county does things in a big way!)

DRAWING: The first one hundred entrants to register will have their names entered in a drawing for about \$100 worth of musky plugs and lures.

Entry fee for the contest is ten dollars. This initial fee qualifies the entrant for *any one* of the three prizes offered for the largest fish. If one cares to try for FIRST, SECOND, AND THIRD PRIZE, he may pay an additional

\$5.00 fee for each. Thus, if an angler pays a \$20.00 entry fee and catches the three largest fish in the two-day affair he takes all three prizes. The basic \$10.00 entry fee allows all entrants to qualify for the "mystery fish" prize.

CONTEST AREA:

The fishing area for the contest will be the Juniata River within the confines of Juniata County and a small portion of the Tuscarora Creek up to the railroad bridge at Port Royal.

CONTEST TIME:

The contest begins at 6:00 a.m., October 2nd and ends at 4:00 p.m., October 3rd.

REGISTRATION:

Anglers desiring to enter are urged to register by mail prior to September 18, 1976. Entry fees and full information should be sent to:

THE JUNIATA JAYCEES

Mifflintown, Pa. 17059

Although registrars will be present for late registrants at each of the four PFC access areas on the river in Juniata County (just before 6:00 a.m. on October 2nd) a small penalty fee of \$2.50 will be added to the basic \$10.00 registration fee for anyone registering after midnight September 18th.

RULES:

Prize winning fish will be determined by LENGTH. Weight will be used to break any possible ties. Fish Commission rules and regulations regarding fishing methods and devices, sizes and limits, will apply to muskies and any other species caught during the tournament.

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Fish in water with a strong current are almost certainly feeding. Otherwise they would not exert themselves to remain in position against the force of the current.

A tough bass that buries itself in weeds presents a real problem. Sometimes the angler is unable to move the hooked fish out of the vegetation. As a last resort, slacken the line and take the pressure off the fish. It may swim out of the weeds into more open water.

Heavy weed beds in relatively shallow water are favorite haunts of pickerel and good places to fish. Pickerel wait in ambush in the weeds for their prey. Fish the outer edges of the weed bed as well as pockets of open water in the weeds.

Avoid bushy, heavily hackled wet flies. They will not sink properly, and besides they are not a true imitation of an aquatic insect in the water.

Use the smallest possible sizes of snaps and swivels. Sizes 10 or 12 in a snap swivel or swivel and Sizes 0 and 1 in a snap are small, yet they will handle a wide range of lures.

Plugs with the shape, color and markings of a small fish of their own species are effective lures for pike and pickerel.

Try using a sinking line with a bass bug. It will help you slow the action of the lure and also give you better control.

Most popular types of spinners are the Colorado, Indiana, and Willowleaf. The Colorado is nearly round, turns slowly and is effective in slow currents and in lakes and ponds. It usually is fished by itself. The Willowleaf is narrower and turns faster. The Indiana is between the other two in blade shape and action. Colorado and Willowleaf spinners should be fished with a wet fly, small streamer, or tiny piece of pork rind attached.

Pork frogs are not just surface lures for weedy waters, although that is the function they perform better than any other lure. They can also be fished deep, sometimes even on the bottom, if they are retrieved with a gentle and erratic motion much as a jig is used.

Lights that flash on suddenly frighten fish, but a light that casts its rays steadily over the water is an invitation to night fishermen. Insects are attracted to the light area. When they fall into the water, small fish eat them. And usually lurking in the area are large fish that feed on their smaller relatives.

In the fall, pike do a lot of feeding in the shorelines shallows of lakes and ponds.

If jigs are not doing a good job for you, try putting a minnow on the hook to "meat up" the hair or feathers with which the jig is dressed.

CO-OP NEWS

by Bill Porter

The Solanco Farmers Sportsmen, Lancaster County, are a bit overdue for their moment in the sun as veteran member of the Cooperative Nursery Program. And "moment in the sun" are well-chosen words, considering the beautiful weather and the charming pastoral scene in and around the nursery site on our recent visit.

The club's cement block raceway produces about 2500 trout a year for area fishermen with a reasonable number of holdovers to add some strength and length. The trout do well with good growing conditions, including winter temperatures that permit active feeding year-round.

Speaking of the holdovers, these larger fish are placed in a convenient farm pond situated about 100 yards below the raceway. The pond can be drawn to net the fish for stocking, but it serves another and important function. It is the scene of mass activity once a year for the club's annual KIDS' DERBY.

This event is more than the average outing for youngsters. In fact, it turns into quite a gala affair with several hundred people in attendance. Any child up to age 12 is eligible for three fish,

prizes, food, instruction, and exposure to the excitement of fishing and a lot of people doing a fun thing together.

Ken Shoemaker, nursery manager and property owner, which is a nice combination, described the fifty-foot raceway as effective and unique for the club's purposes. The cement block structure has a concrete floor, screens, keyways, and two sections in its system. There is room to expand towards the holding pond should the club so desire.

Some problems with the intake system have occurred from time to time with silting of the dam resulting from high water. The intake system is covered, which helps with the debris problem and work on the dam is contemplated for this summer. Pipes from the intake site to the raceway are underground (below frost level) and so the flow is not hampered by cold weather.

Ken pointed out that human predation is not a problem to his knowledge and this is good news these days. Unfortunately, most clubs have been and are reporting just the opposite.

However, the nursery is not predator-free and sturdy screens have covered the raceway for the last several years. Of course, there is no convenient way to cover the farm pond and here there are some fish losses.

Among the natural predators, blue heron top the list at this particular nursery. On a visit in 1973, we arrived in time to see a blue heron help itself to a foot-long brown trout out of the pond. The heron had stalked the trout as these long-legged wading birds will do, spearing the fish with its bill. Then it was out on the bank for a juggling act to get the trout head first down the throat. It was a

struggle, but the bird accomplished the task. Whether this is normal behavior for herons or not, we can't say; but it is a fact that it did occur while we watched. Besides Ken attests to the fact that herons are on the scene nearly year-round and probably remove a few of the larger trout from the pond on a regular basis.

At the time of the visit, the Solanco sportsmen were raising about 2700 trout, primarily browns and a few rainbow holdovers. A second pond was being utilized for some of the holdover fish with a total of 2200 trout scheduled for stocking. Other than the fish used by the youngsters on Derby Day, the Octararo Creek and the Mowery Run tributary get the bulk of the club's efforts each year.

Pellets are the basic diet with some venison. The trout grow well on this standard diet combination. And, as mentioned above, water quality and temperature do the rest.

In speaking of the club, Ken Shoemaker feels it is a good active one with a number of activities other than the nursery for its 300 members. Ken's fish committee is an effective one with John Herr one of the prime movers. John is a contractor and that certainly helps any club in a dozen different ways that are obvious to all sportsmen involved in, or interested in, the cooperative nursery business.

And that's about it for the butter-cupped green pastures, the golden Guernsey heifers, the blue herons, and the fine trout of the Solanco Farmers Sportsmen — all doing their bit to enhance the fishing and esthetic pleasures of folks in southern Lancaster County.

The Solanco nursery is located in a pastoral setting, typical of Lancaster County.





The Great Container Controversy

by Bill Schneider

A new concept that conserves tremendous amounts of energy and natural resources, reduces litter, protects thousands of acres of wildlife habitat, creates jobs, helps keep land open to hunting and fishing, saves consumers and industries money and has little, if any, long-term impact on the economy *should* enjoy an easy ride to reality. But when the concept requires a fundamental change in American life styles and a short-term restructuring of industrial logic, the ride is definitely *not* easy.

So it is with vital legislation banning nonreturnable/nonrefillable beverage containers. Everything about the famed "bottle bill" seems

basically appealing. But several industries have put forth supreme efforts to block it.

Faced with resource shortages, an energy crisis, a proliferating litter problem, increased posting of private land and disappearing wildlife habitat, it seems totally appropriate to start *reusing* beverage containers. Nationwide, it would mean nine million tons of trash (mostly basic resources) the country could *reuse* each year. This is unquestionably better than digging up thousands of acres to extract these resources year after year. And, according to former Oregon Gov. Tom McCall, a national bottle bill would annually save the equivalent of energy used by nine

million people in New England.

It would also help clean up America's roadsides, trails, beaches, parks, streams and lakes which too frequently are littered with beer cans or broken bottles. Indeed, it would be nearly impossible to find anyone who isn't against this "trashing up" of America.

However, breweries, glass and can manufacturers, aluminum processors, supermarket chains and soft drink companies prefer to continue producing and distributing *60 billion to 80 billion* throwaway beverage containers every year. *That's about one throwaway per day, year round, for every U.S. citizen* — many of which end up in

landfills, along highways and wilderness trails, in lakes and streams and on beaches or other recreational areas.

The container controversy first reared its head when the Oregon Legislature approved the nation's first bottle bill. Although there were environmental overtones, the basic force behind the bill was litter reduction.

McCall flatly states that lobbyists ". . . worked against that bill more ferociously than any lobby we have ever had in this state." Nonetheless, it passed.

Basically, Oregon's bottle bill contains these provisions:

** Carbonated beverages (beer and pop) can't be sold in nonreturnable cans or bottles.*

** The container must be clearly marked with the deposit value (i.e., five cents).*

** A basic deposit value of five cents per container was imposed.*

** A two-cent deposit was allowed on some "certified" bottles that conformed to a standard size and shape. These can be collected and reused by several companies, thus simplifying the entire storage and handling process.*

** Removable, metal ring, "pull-tabs" on cans were banned.*

** All retail dealers must refund deposits (marked on the containers) to anyone presenting empty beverage containers (bottles and cans) of the kind, size and brand they sell and for "certified" bottles even if they don't sell that brand.*

** All distributors must collect returnable bottles and cans from retail dealers and pay them the amount marked on the container.*

" . . . It (the bottle bill) will prevail eventually because it's a great energy and material saver," McCall explains. "It saves consumers money. It makes the brewers and bottlers a little more. It cleans up litter . . . It cuts down on litter pick up costs. And on top of all that, it creates jobs."

But the opposition doesn't quite see it that way. Critics claim it will increase unemployment, rob consumers of their freedom of choice, become an "economic disaster" and have, in general, a catastrophic im-

pact on an industry too deeply committed to the throwaway system.

Since Oregon approved this new concept in 1971, hundreds of similar bills have been introduced in almost every state and many localities. However, only three states — Oregon, Vermont and South Dakota — and a few communities have bottle bills. All other such bills were successfully beaten back by industry lobbyists. Also, many of those that passed were tied up in the courts.

The Adolph Coors Co. of Golden, Colo. has been a major defector among industry ranks. Coors voluntarily started its own deposit and recycling system which has been quite successful. Apparently, other breweries won't follow this lead as William Coors estimates \$20 million will be spent this year to defeat container legislation. Obviously, the opposition is digging in its heels for a bitter battle to the end.

Briefly, the debate narrows to these basic points:

Energy

Opponents downplay energy savings, suggesting they will be minimal and hardly worth this drastic action. However, the facts prove otherwise.

Researchers in New York found the bottle bill would save, in this one state, enough energy to heat at least 125,000 homes and run more than 200,000 automobiles. Colorado researchers likewise estimated enough savings to heat 40,000 homes per year. Dr. Carlos Stern, who teaches economics at the University of Connecticut, studied the situation and concluded, "If the nation would go to a national bottle bill and to reusable containers by 1980, the annual savings in energy would equal the output of 12 nuclear power plants of the 1,000-megawatt size."

An excellent report, "Oregon's Bottle Bill: Two Years Later," by Don Waggoner, puts that state's energy savings at enough to heat 50,000 homes or to generate 130 million kilowatt hours of electricity worth \$2.8 million. And McCall claims it takes only 5% of the energy to recycle a can as it does to make a new one.

Nationally, energy savings would run about the equivalent of 39 million barrels of oil annually. Figures like

this prompted John Sawhill, former head of the Federal Energy Administration, to remark, "There are few other instances . . . where energy savings of this magnitude could be achieved as easily"

Litter

The Research Triangle Institute of North Carolina reports that even back in 1969 about two billion throwaways ended up along the country's roadways. And the use of throwaways has increased considerably since then. This, of course, doesn't include bottles and cans littering trails, streams, lakes, parks, etc.

Throwaways make up about 20% to 40% of all litter. Worse, a California study put that state's current litter-caused injuries at about 300,000 annually. The primary villains were broken bottles and pull-tabs.

As alternatives to the bottle bill, industry spokesmen opt for container taxes to fund trash cleanups or accelerated public education campaigns to reduce litter. However, extensive efforts to educate the public against littering haven't cleaned up America, proponents point out. Also, bottle bill supporters object to a publicly financed litter cleanup when consumers are willing to do the same thing for free.

A few opponents even claim the bottle bill doesn't really cut down litter. Again, however, research indicates the reverse.

Two years after Oregon's bottle bill took effect, beer and soft drink container castoffs decreased 83%, according to Waggoner. And *all* litter was reduced, 39% by piece and 47% by volume. Likewise, the Vermont Highway Dept. reports beverage container litter down by 76% and all litter by 33%.

A staff study by the U.S. Dept. of Commerce estimates a 70% to 80% reduction in beverage container litter. And finally, a study by Applied Decision Systems (ADS), conducted for the Oregon Legislature, found beer and pop roadside trash down 66% and all litter down 11% one year after the law became effective.

Thus, a ban on throwaways *definitely* cuts down on litter.

For sportsmen, reduced litter

continued on page 28.



"He disappeared completely. A fly-decorated hat and a pack of cigarettes floated on the surface . . ."

Trout Fishermen I've Been Caught With

by Larry Servais

"Each time he hooked a fish it would start harvesting weeds . . ."

Two trout hit my flies at the same time. At once they started chopping up the surface of the spring pond. Just then my feet skidded off the edge of the bank into a foot of water and several feet of black muck.

I wanted to land that double strike first and then crawl out. But at the rate I was going down I wouldn't be around that long. Clutching my rod I twisted around and fought my way back up on the boggy shore. When I turned around, the trout were still on, splashing around, at times having a tug of war with each other.

Just then my companion, Everett, broke into my world. "We'd better start back," he cautioned, "if we are going to find our way out of here before dark."

To get to this good fishing spot required about three hours of work. The only way to get there from the nearest road was by boat. We rowed for an hour up the first lake, then a quarter of a mile up a sand-bottomed connecting stream hardly wider than the rowboat, a mile across that lake, and finally a somewhat difficult mile up a stream to a series of spring ponds.

What Everett was worried about was finding the outlet of this small stream connecting the two lakes. Even in daytime it would require a bit of searching in the weed growth covering that end of the lake. After dark it would be a real problem.

But I was highly uninterested in navigation just then. I was having a circus with a horde of eager, unsophisticated trout. My casting technique was awful, but the trout didn't care. They struck at almost every cast. They were daffy about a black gnat. Everett had been using worms which the trout scornfully ignored.

Fishing companions can be classified much like the fish themselves. Everett was one of the earlier ones in over forty years of trout fishing. He belonged to the



dunk-and-run species. If he didn't get a strike by his second or third cast he was all for taking off to somewhere else. This time he was anxious about just getting out. We were in big timber, and the pond was heavily shaded in late afternoon.

"We'll never find the outlet if we don't get going," he cautioned.

"We can worry about that later," I said, oozing mud and trying to retrieve my backcast from a tamarack.

But Everett wanted to worry right away. He practically dragged me away from those trout. I grumpily slumped on the back seat as he handled the boat, cheered slightly by the sight of him trying to row and at the same time keep from being eaten by a million mosquitoes.

Out on the lake the sun was still visible. Everett's spirits perked up. He pulled a handline out of his kit, and wanted to troll. At that time this lake was loaded with two things, long, stringy weeds and fifteen-inch

fish we called snake pickerel. They came packaged together. Each time he hooked a fish it would start harvesting weeds with the line. By the time he got it near the boat it looked as though he were towing a small haystack. He would lift the whole mass of vegetation into the boat, and then peel off armfuls of the stuff until he got down to his fish. If the pile quivered when he deposited it in the boat he knew there was a fish somewhere inside.

I grunted in scorn at this performance, thinking of the dozens of guileless trout dimpling the dark, intriguing waters of the spring ponds a mile away. I'm still mad at him — after forty years.

Another type of fishing companion is the kind that takes along about everything he owns. You have a hard time finding your rod and creel mixed in with the cargo. In fact you hesitate to open the car door for fear of starting an avalanche. My outstanding specimen for this type is

"lately he has added three new items, a geologist's hammer, a metal detector, and a Geiger counter. These give us something to do if the fish aren't biting."



"Doc." As a fishing partner he is tops, but wow, the gear he takes.

On a one-day trip most fishermen toss in their waders, lunch and fishing tackle, and they're off. But Doc is always afraid of leaving something behind that we might need. He has his waders, a pair of hip boots in case he rips his waders, a pair of leather shoe pacs for hiking, and a pair of moccasins.

For lunch there's an ice chest crammed full, and a box or two of canned stuff, starting with canned meats and soups and running up and down the scale of vegetable and fruit juices. There's a cook kit and a gasoline stove in case we want to fry some fish, a gallon plastic container of fresh water, a canteen and two thermos bottles of coffee.

On top of the station wagon there's an aluminum canoe in case we want to try a lake. There's a half-horsepower motor and a bracket for it, two anchors, two life preservers, three paddles, and a can of gas for the motor.

There's a packsack or two — in case we decide to hike in somewhere — two sizes of camp ax, a trench shovel, a winch (in case we get stuck), a few folding camp stools, a minnow bucket, and a supply of oxygen tablets to keep the minnows fresh.

Then there are miscellaneous items such as a camera, binoculars, an assortment of handbooks on birds, trees, flowers, rocks, reptiles, a couple of flashlights, a first aid kit, an electric fish finder, and a barometer to tell us why we didn't catch any fish. On top of this he tosses in enough fishing tackle for a Boy Scout troop. We look as though we are out peddling sporting equipment instead of on a little fishing jaunt.

Lately he has added three new items, a geologist's hammer, a metal detector, and a Geiger counter. These give us something to do if the fish aren't biting.

The Geiger counter came to life just once — *in a filling station*. The station owner had a large rock collection spread out on display. A western friend had sent him a specimen of uranium ore, but he couldn't remember which piece it was in his collection. We picked it out for him in a hurry. But the counter was set too high. The needle leaped out of sight, and the tube burned out.

The metal detector sends us wandering around where logging camps once existed. Here we uproot such things as old tin cans, railroad spikes, rusty cable, old nails, odd bits of scrap iron, and no end of

metal barrel hoops.

When I go with Doc I go light. I can hardly get myself into the station wagon. I nudge over a bunch of items, and then dexterously slip in far enough to close the door.

Almost any veteran angler has been out with the awkward type of fisherman. My all-time nomination for that Oscar is "Red." *Red did love to fish!* He would persist in his struggles to catch trout through most of the day and into the night until he couldn't see the tip of his rod, or had broken it off.

His most ample opportunity for displaying his skill at being awkward occurred during a week's camp on a stream during the model-T days. His rod tip suffered immensely. I kept repairing it for him. After three days his rod was two feet shorter, and he started shrinking an old spare one of mine. Each time he had an explanation. The only one I can remember is that once he hooked into a snag and thought it was a grandfather trout. Besides regularly breaking his rod, he decorated the streamside trees with flies with lavish abandon.

Falling down in the stream was also his daily chore. Fortunately he didn't wear waders. If you owned a pair of fishing waders in those days you were really in the bucks. When not fishing he usually had his fly book and a mess of soggy, discolored cigarettes spread out in the sun to dry. Finally he took to carrying his pack of cigarettes under his hat to protect them. But even that didn't save them one morning.

I was downstream from camp looking over a deep, wide hole that neither of us had fished before. I was sitting on a log watching for a rise when Red came into view, diligently tossing flies. As he got close to the

hole he was waist-deep in the water, and finally up to his chest. He stopped then, but became absorbed in trying to put his fly further out, and took another step. He disappeared completely. A fly-decorated hat and a pack of cigarettes floated on the surface, and the upper part of his rod protruded from the water like an antenna. He came up with a snort about ten feet downstream, clutching his rod with one hand, swimming with the other, trying to catch up with his cigarettes.

Trips with Red were always entertaining, even when the fish didn't bite. Occasionally a trout, possibly one of the more awkward member of the tribe, did find itself on his line. To him I owe intensive training in emergency rod repair, and a concentrated course in what not to do when trout fishing.

If you've never gone out with the explorer type of trout fisherman, *don't!* He's always looking for a place where no one else goes fishing — and when you get there with him you find out why. A bulging sack of Geological Survey maps and a stream thermometer go with him on every trip.

"Look," he'll say, in a manner that would make a confidence man envious, "there's a spring pond two miles from the nearest road."

You make your first mistake by looking where he is pointing on the map. "That pond drains into a trout stream, so there must be trout in the pond too."

You murmur that you never heard of anyone fishing that pond. "Of course not," he'll respond. "If anyone were getting some good old-time fishing in there, *do you think they'd be crazy enough to tell?*"

Your second mistake is finding

yourself slogging along behind him through ooze and brush, with him checking the map and compass every hundred yards. By the time you've had your fill of pushing brush, and are more concerned about getting back than fishing, maybe you do find his pond. But it's shallow, and a check of the outlet with a stream thermometer shows the temperature in the low eighties, about ten degrees higher than any trout could stand.

"Well, we know what's here now anyway!" he says, trying to salvage something out of the trip. In other words he has added another spot to his long list of places where you can't catch trout.

Before you are back out of the brush he's at it again. "The beaver are working their way up Haymeadow Creek. Now if we could find a beaver pond of the right age. . . ." But if experience does anything for you, you'll let the beaver work their way up the Haymeadow and not try to follow them.

In addition to his sackful of maps he has a lightweight canoe to help him get to places that other fishermen can't reach. These trips can be even worse than those afoot. You find yourself in the prow of this canoe on a narrow stream, trying to

help propel it through a canopy of brush hanging from either bank. In all probability you are the first white men to navigate this piece of water. And it's practically certain that no Indian was silly enough to try it either. But, it's supposed to lead to some place where there are trout.

After a half-mile, there are two inches of water in the bottom of the canoe as a result of climbing in and out to drag it over logs and shallow places. There is a layer of leaves and dead twigs over everything, and dozens of dislodged spiders crawling about. You have become an expert at breaking off branches that obstruct passage. Everything's a mess, including yourself. If ever you do indeed get to where you are going — you have the return trip to look forward to!

Once, after just such a trip, we nosed out onto a spring pond, a cargo of sweat, scratches and litter. There stood two clean-looking trout fishermen in waders, leisurely casting out into the pond. "Oh yes," said one of them in response to our inquiry, "there is a good trail leading back to the road, right down here."

This last character ruins more fishing trips than all the others together. And I can't seem to do anything about it . . . *I'm the guy!*



" . . . it's shallow, a check of the outlet with a stream thermometer shows the temperature about ten degrees higher than any trout could stand.

Once a year, every year, at Tidioute— Fishing is King

by Bob and Lin Steiner

Seldom, if ever, can the thrill of landing a trophy fish on a beautiful river be beat. If it's autumn and the leaves are fully colored, the excitement seems even greater. But if you are lucky enough to catch a trophy fish from the Allegheny River during the Pennsylvania State Fishing Tournament you are indeed fortunate. Besides having spent a day in some of the state's most scenic country and having landed some nice fish, you can also go home with beautiful prizes and perhaps the crown of "King of Pennsylvania Fishermen."

Last October, the Tidioute Lions Club, under the direction of tournament chairman Thomas Shoemaker, sponsored the 16th Annual Pennsylvania State Fishing Tournament. Like sportfishing itself, the tournament has grown over the years. The 1975 tournament drew fishermen and women of all ages from across the state and as far away as Michigan. Many more came just to partake of the festivities surrounding the contest.

One needn't have been a contestant to have fun. There was much to see and do in Tidioute for tournament spectators. The main streets of town were decorated with banners and signs proclaiming the contest and many storefront windows were painted with humorous fishing scenes. A small carnival was on hand for the kids, while bake sales and craft booths lined the streets. Both the Pennsylvania Fish Commission and Pennsylvania Game Commission were represented by interesting displays.

The biggest feature of the tournament on Saturday was a 60-unit parade which included many floats depicting the "joys of fishing." The crowning of the Fishing Tournament Queen and her court was also held. In the evening a local Grange

sponsored a delicious smorgasbord dinner, while the main event was Sunday with the announcement of the tournament winners and prize presentations.

While visitors were enjoying themselves on the streets of Tidioute, the real participants in the tournament, the competing anglers, were applying their fishing savvy on nearby waters. All tournament rules had to be strictly adhered to by contestants. These included:

1. Contestants must be either properly licensed residents or non-residents. There was no fee for entering.

2. All Pennsylvania fishing regulations were strictly enforced.

3. The qualifying fishing area was the Allegheny River and its tributaries between Kinzua Dam and the Hunter Station Bridge below Tionesta.

4. The tournament committee reserved the right to disqualify any participant entering fish that the judges found were not fresh or were not caught by the contestants.

5. All fishermen with high point counts on Saturday might be checked by referees on Sunday.

All fish caught were to be displayed on an iced table until after the conclusion of the tournament for spectator viewing.

Angling contestants qualified for awards by catching gamefish in four categories. Each species was assigned a point amount which was credited to the fisherman who caught it. A muskellunge scored 10 points if it were 30" or longer; northern pike 24" or longer were worth 8 points; walleye, 4 points if 18" or more; and either species of bass, largemouth or smallmouth, 12" or longer, gave the angler 2 points.

At the conclusion of fishing hours on Saturday, awards were given for

the heaviest fish, musky, walleye, northern, bass and carp. First place in each category gained the recipient \$25; 2nd place, \$15; and 3rd, \$10 with the exception of a first place prize only for carp. A \$50 prize was presented to the lucky anglers who caught the longest Citation-size fish in each of the four gamefish categories.

Sunday was the final day of the tournament and brought the main presentations. A trophy and a \$50 cash prize went to the "King of Fishermen." The crown and First Place awards were presented to Thomas Divido of Nanty Glo, Pa. who accumulated the greatest number of points — 22. Second Place and \$30 was taken by Jeff Priest of Indiana, Pa., for 16 points, while 3rd and 4th places and the accompanying prizes of \$20 and \$10 were split by Lee Murray, Tarentum, Pa., and Richard Wagner, Warren, Pa., with 14 points apiece. A fifty dollar award was given for the longest citation fish in each category. The largest gamefish entered was a 43-inch muskellunge.

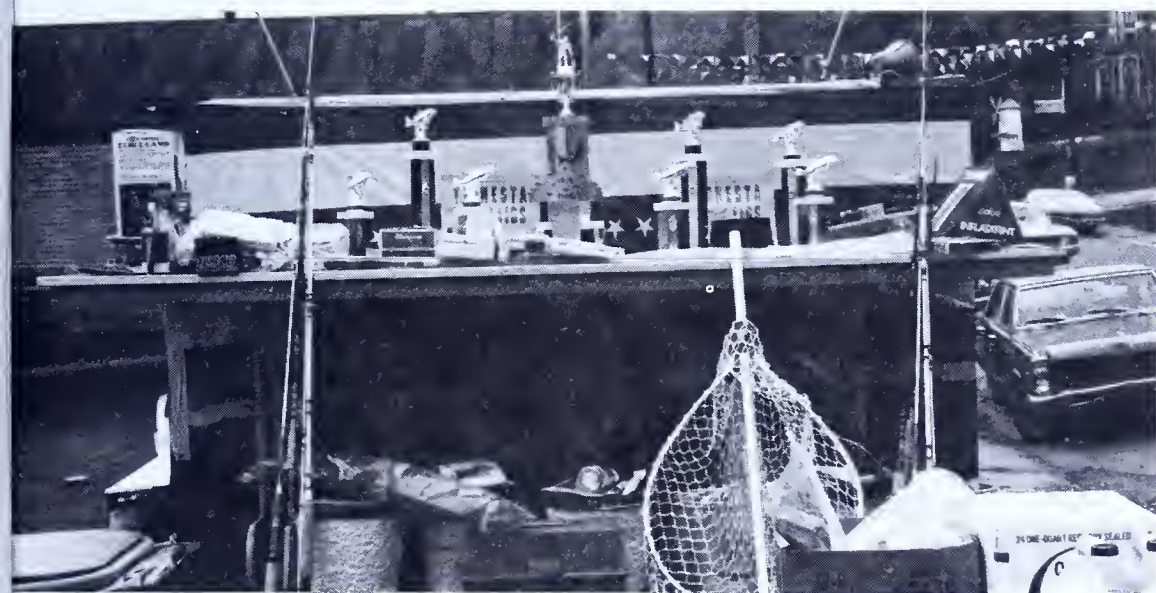
Many beautiful gifts had been donated by local merchants and tackle dealers for the contest. These were awarded to tournament winners and also given away in a drawing to fishermen who brought in qualifying fish. Door prizes were also given in a drawing for the attending public.

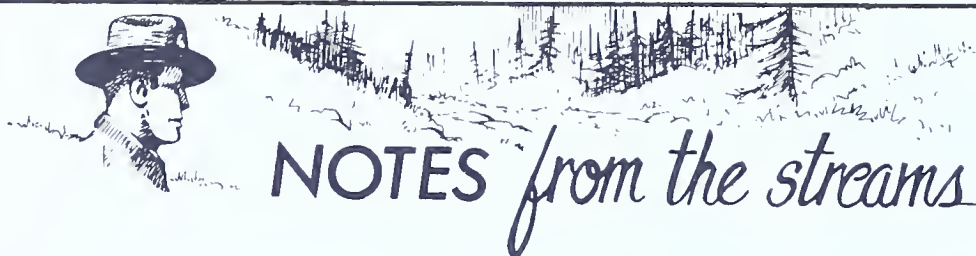
The 17th Annual Pennsylvania State Fishing Tournament, scheduled for Saturday and Sunday, October 9th & 10th, 1976 promises to be bigger and better than ever. If you are planning to attend, you may obtain camping or lodging information from the Kinzua Dam Vacation Bureau, 305 Market Street, Warren, Pa. 16365.

And, do plan to be there this year. It's a fishing event not to be missed. With a little luck and the right lure or bait, *you* could be crowned "1976 King of Pennsylvania Fishermen" in Tidioute, the town where fishing is king. The title alone is worth striving for. It can gain you fame, prizes, money, a trophy . . . and a kiss from the lovely tournament queen!



Store windows in the tiny village of Tidioute welcomed fishermen to last year's tournament. Part of the crowd is shown at top right milling about the table where the catches were displayed. Ed Gritz, right, drove up from Pittsburgh and caught that 36 $\frac{1}{2}$ " 29 lb carp on a crayfish. There were prizes and trophies galore, below. Waterways Patrolman George Jones is shown addressing gathering in the photo at lower left. Holding that pair of muskies, lower right, are Ray Carlile with his 43" 22 lb 3 oz fish, left, and Joseph Solich whose fish measured 36 $\frac{1}{2}$ " and weighed 13 lbs 15 $\frac{1}{2}$ oz. Both anglers came from Johnstown.





In Memoriam



Harold Corbin
1911-1976

Harold Corbin, Chief Enforcement Officer of the Pennsylvania Fish Commission from 1967 to 1972, died July 14, 1976.

Mr. Corbin joined the Commission in 1947, serving as "Fish Warden" in Huntingdon County. In 1951 he was promoted to Regional Supervisor, serving a nine-county southcentral Pennsylvania area. In 1965 he was transferred to a similar post in southeastern Pennsylvania where he served until his promotion to Chief Enforcement Officer in 1967.

Former Chief Corbin is perhaps best remembered for having initiated the first formal training program for Deputy Waterways Patrolmen. He retired from Commission service on April 7, 1976.

HOT DEBATE!

At the Fish Commission booth at the recent Northeast sports show, we overheard a man telling his wife that he guessed the Commission used the same fish for the exhibit every year as he thought he recognized most of the fish from the year before. Whereupon the wife promptly stated that she thought this would be impossible as she had read somewhere that all fish die every year after they lay their eggs. When they were walking away, I heard the man tell his wife, "You better not say that loud enough for anybody to hear you; they will think you don't have any brains at all." Then I heard him tell the woman, "Common sense will tell you that fish must be more than a year old before they can even lay eggs."

Claude M. Neifert
Waterways Patrolman
Luzerne County

CONSIDERATE ANGLER

While on my regular patrol of lakes and streams I noticed a young boy dragging a burlap bag. I approached the boy and asked him what his bag contained. To my surprise his answer was, "Litter." He went on to explain to me that he loves fishing, but when they are not biting, he goes picking litter. I commended the young boy and continued my patrol. Two weeks later I ran into the same boy at Rabbit Run, a Cooperative Nursery in Schuylkill County. This time he had several signs with him which he made himself. The signs stated: PLEASE DON'T LITTER. He made his own signs and poles to mount them on and placed them around the shoreline. I would like to commend this thoughtful young boy. With young anglers like him growing up I'm sure our streams and lakes will be litter-free. The young angler I'm referring to is John R. Swenson, 13-years-old, from Mary D, Pa. Keep up the good work, John!

Raymond C. Hoffman
Deputy Waterways Patrolman
Schuylkill County

RESPONSIVE READERS

After my "Note from the Stream" in the May *Angler* regarding the homemade fishing rod and its "sale" to an elderly Juniata County angler, I received several calls and letters. One call and one letter are especially worth noting.

A call from Mr. Lauver, the elderly angler, to inform us that the young lad he bought the homemade rod from had caught a 14" brown trout on his "new" equipment and was quite thrilled.

A letter from Mr. Frank Bedisky, Mahony City, stated in part "... it brought a pleasant feeling to me reading that there are plenty of fishermen who are gentlemen ... this action gives a person another look at Pennsylvania anglers besides hatchery truck followers ... further in the *Angler*, in *Ashore and Afloat*, Gene Winters wrote, 'to reach out and touch someone's life in a positive way'."

Boy, what a double contribution to further pleasure fishing in Pennsylvania.

Richard Owens
Regional Supervisor
Southcentral Region

DESERVES A MEDAL!

A recent prosecution for a litterbug violation resulted in a two-fold sense of satisfaction for me. First, any time a litterbug does not get away is satisfying. Second, and most important, is the way that the prosecution was made. An angler saw the violation take place along his favorite stream and the party drove away. The angler took the license number, description in detail of the car, color, make, etc., and even the description of the person that committed the violation. The information was given to me and was followed up to a successful prosecution. Unusual? Yes, in more respects than one. Pennsylvania anglers *themselves* are starting to crack down on the SLOBS which is enlightening.

But, the way is being shown by a 13-year-old boy ... the angler who took this information! Thanks, Mark! With young people like you caring enough about the environment our job becomes much easier and your sport becomes more secure.

Paul Antolosky
Waterways Patrolman
Centre County

LOGICAL -

A short time ago, Mr. Joseph Ginder, a local crappie bass fisherman from the Canonsburg area, was in need of some basic fishing tackle and was accompanied by his granddaughter of about 10 years of age. After walking into a local sport shop, they were greeted by a large assortment of lures displayed all over the store. As they passed an artificial mouse, which is used for muskies and other large gamefish, the little girl exclaimed, "Look granddad, a mouse! I know what that is used for!"

Puzzled at his granddaughter's newfound knowledge, Joe looked at her and asked, "What is it used for?"

With a positive expression on her face, the little girl blurted out, "That's what they catch catfish on!" Now, whenever the catfish fishermen start telling Joe about the best baits for catfish, he repeats the story of the most "logical" bait to use.

Stan Plevyak
Waterways Patrolman
Washington County

READ UP!

Recently, while talking with a school teacher he stated, "Nine months out of each year I spend telling the kids if you don't read first, *then act*, someday it will get you in trouble." He chuckled as he paid his fine for an undersized fish. Then he said, "I thought pickerel had to be

twelve inches, but I just couldn't take the time to read the *Summary of Fishing Regulations* before I kept him." I believe the old adage: "Don't do as I do, do as I say" held true here.

Robert Lynn Steiner
Waterways Patrolman
S/Luzerne County

CLOSE!

While on patrol of Marsh Creek Lake, I was observing two men fishing from a boat. One of the fishermen would occasionally make a side-arm cast which, incidentally, can be dangerous when there is more than one person in a boat. As I was watching, I saw the side-arm caster make a cast directly over the head of his partner and away flew his partner's baseball cap with a muskie plug embedded in it. Think what might have happened if the cast had been a quarter of an inch lower!

R. A. Bednarchik
Waterways Patrolman
Chester County

WHAT GENERATION GAP?

The following was related to me by Tom Ashton, Sporting Goods Manager of Murphy Mart in Harmarville, Pa.

Mr. W. C. Thompson of Verona came into the store just before trout season with his son and wanted to buy licenses for both of them. Unusual story? No, unless you know their ages. The elder Mr. Thompson is 93 years young and his son is 65!

Gerald T. Crayton
Waterways Patrolman
N/Allegheny County

PLAYING IT SAFELY!

Recently, Deputy Waterways Patrolman Matt Crawford went fishing along the Allegheny River at Shenley, Pa. A fisherman nearby tied into a large fish and Matt, having a large net, went to his aid. Upon landing the fish, a 22-inch musky, which Matt measured and identified, the fisherman stated the following:

"This is the first musky I've ever caught and I sure would like to take it home with me, but you can never tell where that sneaky b___ is at, so I guess I better put it back. What do you think?"

Needless to say, Deputy Crawford told the man, "Yes, I would say the best thing to do is put it back."

Jim Smith
Waterways Patrolman
Armstrong County

THE FISHIEST

I had just finished a program for a club in New Kensington. A few of the sportsmen had offered to help me take some of the equipment to my state car. I said, "You sure can fellows, I can always use some help." One of the men had taken out some of the extra booklets that were left over; another had the projection screen in his hand. He asked me where I had parked my car. Just as I was about to answer, the first fellow said, "Look for the car with the two cats on it." "Cats?" I said. Today, with the language being what it is I didn't know if he meant two guys or two cats. "Two cat cats," he said with a smile. Taking a look for myself, there they were: two cats; one on the roof, one on the hood. "See, what did I tell you," he said, "there they are. At least they know how to pick your car," he said. "How's that?" I asked. "Well, it is the 'fishiest' car in the lot!"

Gerald L. Greiner
Deputy Waterways Patrolman
Westmoreland County

IN BEAVER COUNTY -

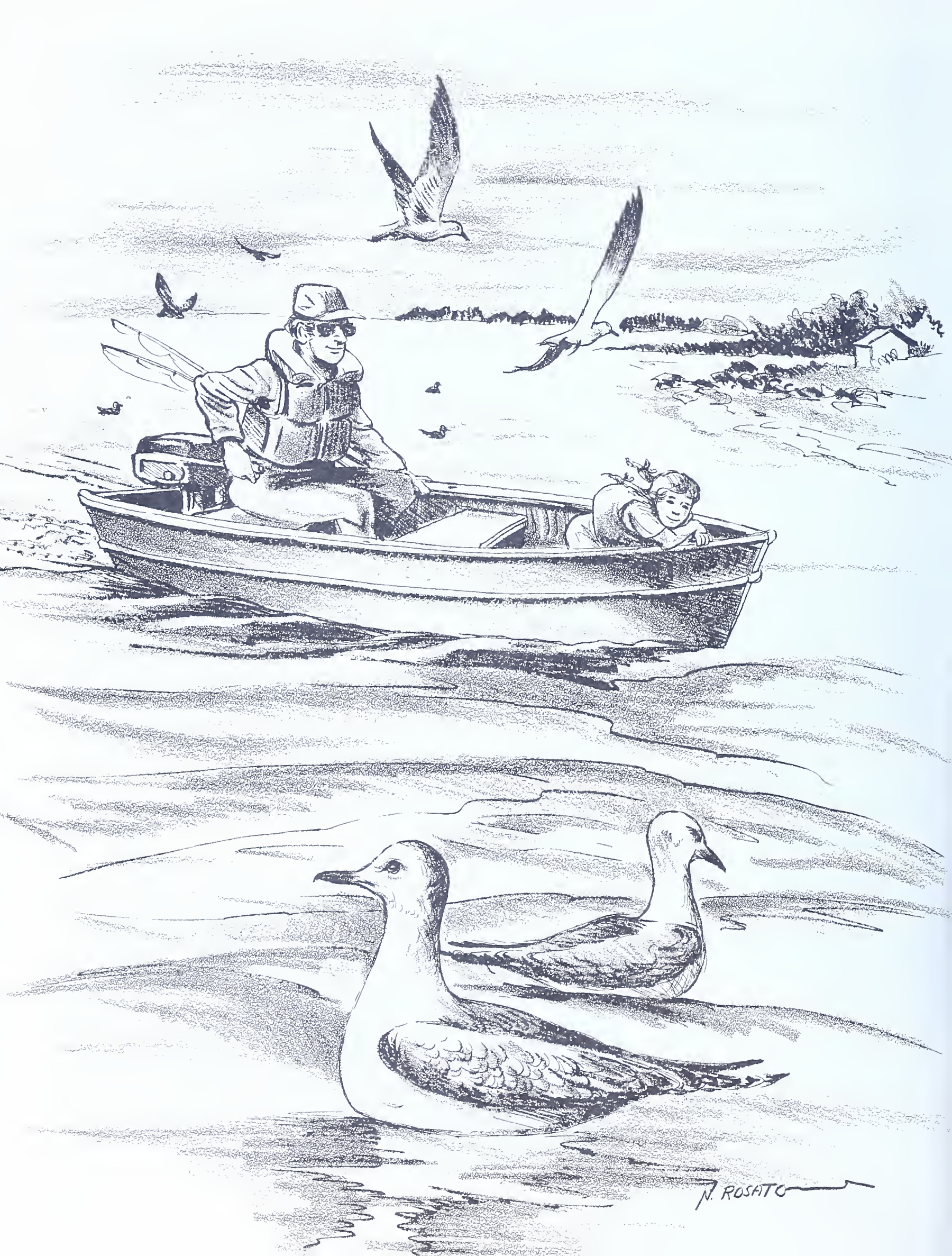
My wife was fishing in Hereford Manor Lake beside a small boy and his grandfather when the lad shouted, "Did you see that?" "See what?" they asked. "That big bass out there by the weeds!" "I'm fishing for bluegills and that big bass came up and stuck out his tongue and licked my worm!"

Deputy Randy Contray called one day to announce that his wife Janice had just presented him with their first child, a healthy boy whom they decided to name Jeffrey Richard. The usual congratulations and inquiry, "How's the wife?" etc., followed. When Randy exclaimed, "He weighs 6 pounds and 6 ounces and he's 19-inches long!" I quickly replied, "Keep him! He's legal size!"

Donald Parrish
Waterways Patrolman
Beaver County



James Lippert's 43 1/2" 28 lb. 6 oz. musky was caught at Kinzua last June.



Through the Eyes of a Little Girl

by Joanne Haibach
Deputy, Erie County

The little girl was restless that day, with summer vacation almost gone — it seemed that everything that there was to do during the summer was done. Dad sensed her boredom and said, “C’mon, Honey, go upstairs and put on your jeans and I’ll take you to Lake Erie and we’ll do some fishing from the boat.”

She went to her bedroom and dressed. “But they say Lake Erie is dead,” she thought “and I don’t know if I want to go out *there*.” She finished dressing — still a little apprehensive about going. “Is Lake Erie really dead?”

Her mom tied her pigtails in blue ribbons and tucked their lunch under her arm. Somehow, she wasn’t excited about going out there — visions of a “dead lake” were a little scary.

It was about 10 o’clock that morning when they slid the boat loaded with gear into the water. The sun was bright and starting to warm the day. A gentle wind was blowing but the lake was smooth and calm. A tinge of autumn could be felt in the air.

She sat in front of the small boat and looked out over the water. Her

apprehensions began to fade and she felt a different kind of excitement. Kids along the shore were kicking, splashing, screaming and swimming; she saw the boats — all sizes, shapes, and colors. Her favorites were the sailboats.

“Look at that big one with the big red, white, and blue sail!”

She watched the waterskiiers glide over the water and a big yacht passed them and the people waved down to her. She saw the people on the shore, lying in the warm sun, building sandcastles and having picnics.

“All the boats . . . all the people . . . it’s beautiful! Dad, why do they say Lake Erie is dead?”

She didn’t hear his answer, as her eyes looked into the blue sky and caught a seagull soaring above her head, his pure white body and wings in sharp contrast against the deep blue. Her eyes followed him across the sky and into the sun.

“When are we going to start fishing, Dad?” He smiled and told her about a *secret cove* he had where there were bluegills aplenty.

They ate their lunch and she watched the boats and skiers. Finally, her Dad steered into their *secret cove* and baited the worm on her hook.

“Now watch your bobber, the fish are hungry in here”.

She held on to her pole with both hands, eagerly waiting for that first bite — the sign that the fish were saying “here we are,” but her attention was diverted again as she looked into the water. Little minnows had caught her eye and she watched them dash and dart along the side of the boat. The water was clean and clear and she could see the rocks, the sand and the seaweed on the bottom. The movement of the

water, with the sun, made patterns on the bottom and there were squiggly lines streaking through the water.

The tug in her hands brought her attention back to fishing, but the fish was gone! Her dad laughed and teased her about a fish trying to get her attention and, when she didn’t answer, he left.

“Would you put another worm on for me, Dad?” This time she was going to catch him and lowered the worm into the clear water, watching it go down.

“I got one, Dad! Would you take him off the hook for me and put on another worm? I’m going to catch another one.” And she did . . . again and again.

“Well, Honey, it’s time to head in for home.” They stowed their gear and pulled in the stringer of fish. “Do you think Mom will cook these for supper?”

As they headed for shore, she looked out over the water again. People on the shore were starting to leave and the boats were sailing into the channel. The day’s excitement had taken its toll on the little girl. She put her arm on the bow of the boat and her head began to nod. The hum of the motor seemed to be singing to her and she put her head on her arm. Once more she looked over the water. The seagulls knew it was time to rest, too, they bobbed up and down on top of the water, their wings tucked in for the night.

Once again she asked, “Why do they say Lake Erie is dead?” She saw one seagull that, almost as if he were grinning, looked back at her out of the corner of his eye and through the grin seemed to say, “*We know better, don’t we?*”

She smiled back at the seagull, nodded, and fell asleep.

Great Container Controversy

continued from page 17.

means less severe landowner/recreationist problems. Many landowners post their land because of unsightly piles of trash left by a few inconsiderate recreationists.

Wildlife, Natural Resources and Environmental Quality

The primary environmental appeal of the bottle bill is conservation of energy and natural resources. A national bottle bill would conserve approximately five million to six million tons of basic resources each year, according to the Environmental Protection Agency. From a wildlife and environmental quality standpoint, this means less destructive mining, exploration and processing.

A considerable amount of the energy goes into producing throwaway containers year after year. We consume energy to produce throwaways, then throw them away and consume at least the same amount of energy the next year to produce more beverage containers to throw away. This process, of course, goes on and on.

The aluminum industry takes a big bite of the nation's energy pie. In Montana, almost one-third of the total amount of electricity consumed is used by one aluminum processing plant, The Anaconda Co./Aluminum Division in Columbia Falls, according to the Bonneville Power Administration. About *one-third* of the Northwest's electrical output goes to the aluminum industry. And right now, at least two new aluminum plants are proposed, one in Oregon and another in Washington. Young's Bay Estuary, a prime wildlife area, was the industry's *preferred* site for the Oregon plant — although it has now been moved to a site near Umatilla.

The Columbia River system has been dammed forever by 135 major impoundments. Another 58 are proposed. And this doesn't consider the dams built or proposed on the Columbia's smaller tributaries.

The once fabulous salmon and steelhead fishery, dependent on yearly passage to and from the Pacific, has almost disappeared. Idaho has been forced to close the season on many salmon and steelhead

waters in a last ditch attempt to retain any kind of fishery.

These dams similarly raze wildlife populations, as big game winter range, waterfowl production areas and other vital habitat ends up under water or as plantless mud flats. Montana's Libby Dam alone ruined about 42,000 acres of big game winter range.

The impact of destructive extraction and conversion of fossil fuels and other natural resources — i.e., strip mining on the northern Great Plains, oil shale development in Colorado, power projects in southern Utah, etc. — would be indirectly eased if America could only conserve. Throwaways can't be entirely blamed for these developments, but they share in the responsibility.

Consumers

Consumer savings is probably the major force in favor of the bill. Prof. Bruce Hannon of the University of Illinois studied this and concluded a national bottle bill would save consumers \$1.4 billion per year.

"Coke sold in food stores in nonreturnable packages is priced, on the average, 30 to 40 per cent higher than in returnable bottles," the president of Coca-Cola, USA told Congress in 1972. Why? Soft drink cans cost about seven cents each. Compare this with the refillable system which reduces the cost per filling to about one cent, according to a Pepsi-Cola franchiser in Portland, Ore.

Opponents argue that the bottle bill denies consumers the "freedom of choice" and the "convenience" of buying throwaways. However, overwhelming consumer approval of the bottle bill refutes this. In 1970, while Oregon was considering bottle legislation, the prestigious Opinion Research Corp. surveyed Oregonians. The surveyors found 62% of men surveyed and 66% of the women in favor of a ban on throwaways. Only 29% of the men and 22% of the women disapproved.

Another survey in Oregon found that only 12% felt it was inconvenient to pay deposits and return empties. A mere 7% thought the law limited their freedom of choice for soft drinks — 3% for beer. And the Applied Decision Systems study, prepared for the Oregon Legislature and dis-

cussed earlier, notes, "'Overwhelming' is virtually the only word to describe Oregon's approval of the bottle bill. Nine in ten (91%) said they approved, and only one in twenty voiced any disapproval at all."

Given this, it appears "convenient" means what's easiest for the industry and supermarkets, not for the consumer.

Opponents have also argued that the bill increases beverage prices to the consumer. However, the opposite appears more likely since it's less costly to use returnables. Coors started its returnable program as an environmental measure, but later found the value of recaptured containers offset most costs. Waggoner says slight price increases were *not* due to the bottle bill but general inflationary trends, grain and sugar price hikes, etc.

Jobs and the impact on industry

Perhaps the most controversial aspect of the bottle bill is its impact on employment. Protesters put the job loss at about 60,000 nationwide. This may be close if one only considers the job *loss* and ignores the *gain*. Overall, the legislation creates jobs. Some industries lose, and others gain. And, it comes out on the *plus* side.

Briefly, the bill hurts the can and bottle manufacturers and helps the bottling industry. In Oregon, about 350 jobs were lost throughout the beverage industry, according to a study by Oregon State University, "The Economic Impact of Oregon's Bottle Bill." However, 140 new truck driving jobs plus 575 more in warehousing and handling were *created*, meaning a net gain of 365 full-time jobs and an increased annual payroll of \$1.6 million.

Understandably, unions representing workers on the negative side of this job shift oppose container legislation. Likewise, workers whose industries gain find their workers supporting the bottle bill — although not as vigorously as those who lose.

In Vermont, the AFL-CIO leadership could *not* get the support of the rank and file to oppose the bill. Oregon's most active teamster calls this "a Teamster bill." And the United Auto Workers favor a national bill, as do such diverse groups as the National League of Cities, U.S.

Conference of Mayors, Environmental Protection Agency, the League of Women Voters and various environmental and consumer groups.

"When I was in Maryland earlier this year," McCall told the American Assn. for Conservation Information in Portland, Ore. in June 1975, "the Council of Economic Advisers noted that a switch to a returnable system would result in a net of 1,500 more jobs in Maryland, would increase the state's personal income by \$18.5 billion, would increase state and local tax revenues by \$1.4 billion and would require less expenditure for cleanup."

McCall describes a similar situation in New York state. "An Oregon-style returnable system would bring about an industry investment of about \$175 billion in new capital and \$35 million in this one state in new payroll, a net gain of 4,007 jobs. Consumers would save \$40 million, as a result of lowered production costs of the industry, and a direct saving of \$2 million would result from elimination of the beverage container portion of litter in New York state."

The Dept. of Commerce study generally confirmed the contentions of bottle bill supporters on this. Nationally, the study forecast a loss of 82,000 and a gain of 95,000 to 115,000 jobs.

Large breweries bitterly complain about the bottle bill now. But ironically, little was said when the shift to *throwaways* centralized the industry and cost America 20,000 jobs, so say Earl and Miriam Selby, writing in the March 1976 Reader's Digest.

In 1960, Americans drank 95% of their beer and soda pop from bottles which were then returned and refilled just like they are *now* in Oregon and Vermont, according to the same article. Today, however, 79% of packaged beer and two of three soft drinks are sold in cans or no deposit,

no return bottles.

"If present trends toward throw-away containers continue," N. E. Norton, president of the Dr. Pepper-Royal Crown Bottling Co., notes, "less than 2,000 soft drink bottlers will be in operation in the United States by 1980, whereas in 1960 there were over 4,500. This same process of concentration in a few large companies took place in the beer industry about 15 years ago, reducing the number of breweries in the United States from 262 in 1958 to the present 64, and to a predicted 30 by 1980."

This transition cost dearly. No longer needing to get empties back to the plant, brewers could instead ship throwaways thousands of miles. This allowed large breweries to invade the markets of their smaller rivals and gradually gobble up the competition. Today, *eight* breweries control *three-fourths* of the market. And it's these giants that would be hardest hit by the bottle bill, as the incentive swings back to the smaller, local breweries.

Testifying to this, Montana formerly had at least one and often two or three breweries in every major city. But today, Montana has *no* breweries — at least partly due to the throwaway system.

Many Montanans feel this is an appropriate and promising type of industry to lure to the Treasure State. But the brewing industry will be difficult to re-establish without a ban on throwaways.

As with employment, industries have gainers and losers. Surely, the country is enmeshed in the throw-away business. And a return to the returnables would have a significant impact on certain industries. However, after a rough one-year transition, there's smooth sailing ahead.

The industry hired Midwest Research Institute (MRI) of Kansas City to determine the impact of the ban.

MRI estimated aggregate impact (including new equipment and additional labor) for brewers, beer distributors, bottlers and retailers in the first year to be a loss of \$247 million. By the second year, however, lower container costs with a refillable system were seen as yielding an aggregate gain of \$37 million.

The beverage industry would rather fight than switch, though. Cutting through all the statistics, it comes down to: Throwaways make more money for the beverage industry and consumers save more money with the returnable system. The consumers want it, but the industry won't provide it voluntarily.

Considering all of this, sportsmen and other outdoor enthusiasts should be fighting mad. In Oregon, sportsmen are shocked to find a broken beer bottle or a pull-tab along a wilderness trail. But the exact opposite prevails over most of the country. Regardless of public education efforts and some interest in recycling, beverage containers continue to dot the landscape, indirectly cause destruction of vital wildlife habitat and waste energy and natural resources. Indeed, the convenience of buying throwaways costs us more than \$1.75 a six-pack.

But the bottle bill is more than an energy and resource conserver, litter reducer and money saver. It's a battle line for changing times. Sooner or later, "waste not, want not" must replace "no deposit, no return." America must replace wasteful, throwaway times with a conserving, husbanding society. And there is no better place to start than the bottle bill. A small deposit brings a large return.

(Editor's note: Bill Schneider, editor of *Montana Outdoors*, Montana Fish & Game Department prepared this feature article for use by member agencies of the American Association for Conservation Education.)

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Ashore & Afloat

by Gene Winters

Since writing in the July *Angler* of the potential number of boaters who might benefit from a boating course, I have been reflecting on possible reasons why so many never find their way into the classroom. Perhaps it is that very word . . . "classroom" . . . that keeps them away. Many boaters have long since finished their schoolroom years and are perhaps reticent and apprehensive about their ability to come to grips with the conduct, discipline and rigors they recall of classrooms past. However, by attending nary a single lesson, these people never find out that most boating courses are conducted on an organized basis but in a relaxed, informal atmosphere.

Many such courses are taught by unpaid volunteers and in almost all cases the instructor, like the student, has put in a grueling day at the office, plant or in the field. Thus, the instructor is able to associate and relate to the student's physical and mental condition when he enters the classroom. To avoid droning his class to sleep and make it "come alive," good instructors augment their vocal presentation with films, slides, training aids and displays that make the class not only informative and interesting but even entertaining. Some class leaders even arrange full scale boat displays or even include one or more practical demonstrations at or on the water.

Sometimes it helps to find out why some people *don't* do something by learning why others *do*. Being an instructor for a Pennsylvania flotilla of the U.S. Coast Guard Auxiliary, a past Flotilla Commander and presently a Division Public Education

Officer allows me to draw on a wealth of first-hand observations, interviews, and written records. I feel the flotilla and division with which I am associated is representative not only of those throughout this state, but the country. Our boating courses draw students who can or do boat on creeks, rivers, lakes, bays and even coastal waters . . . all easily available within a few hours' drive. In addition, serving as a guest instructor or speaker at a number of boating classes held annually by Waterways Patrolmen has added more insight, and some interesting facts are obtained.

Many who finally enroll in a boating course state that, since they have only a very small boat, they long felt they had no need for training. Others delayed enrolling because they only used a boat for hunting and fishing, *not for boating!* On the other hand, some who finally make it to the classroom are unknowingly driven away by a well-meaning instructor. Anxious to make the students feel at home with an "old salt", he relates tales of his *dramatic adventures on the high seas in his forty-footer!* What he inadvertently neglects to tell the class is that much of what he knows today he learned working his way up (?) through innertube, raft,

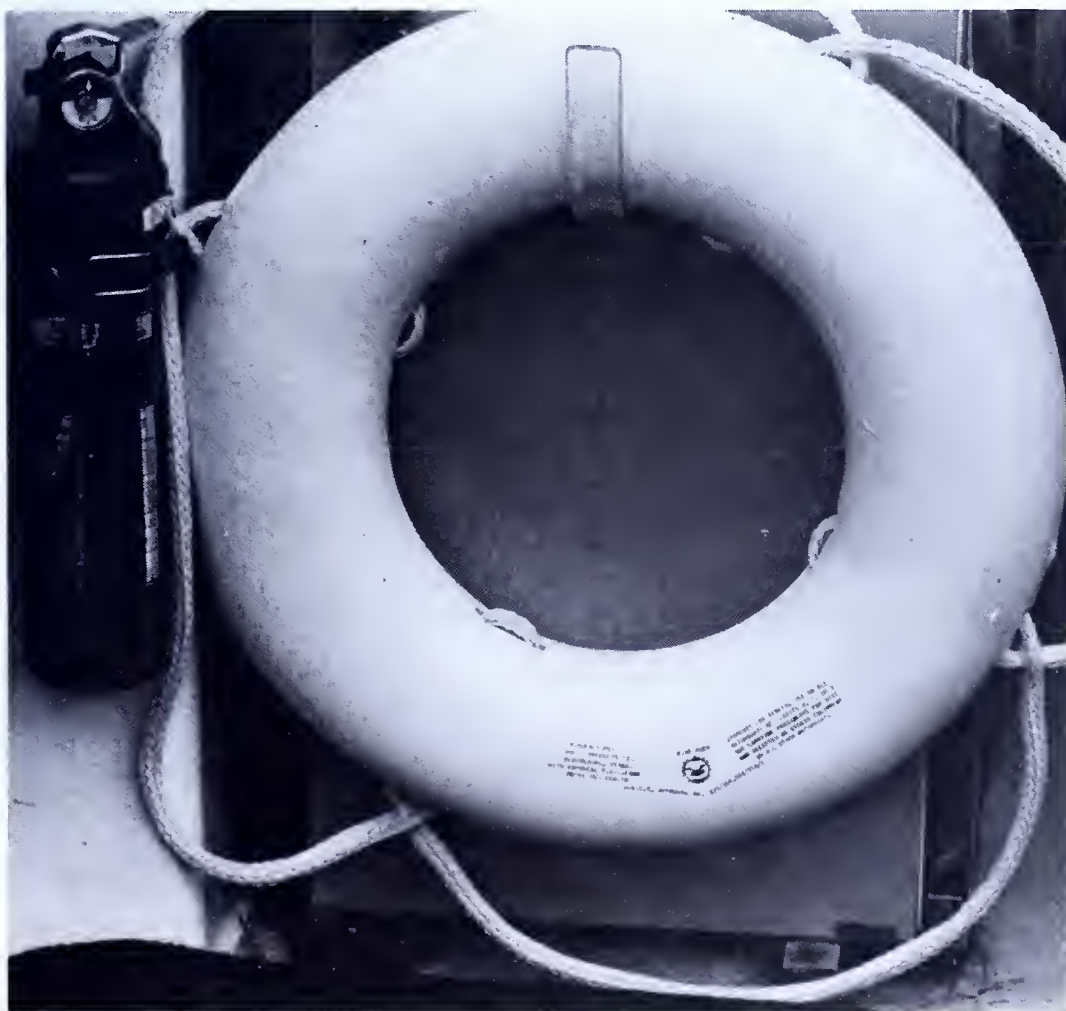
jonboat, runabout, etc. In addition, he may fail to stress that not only do most boating basics apply to *all* boats, these basics can be *even more* important on small boats simply because they *are* small! Alas! Many first-night students are never seen again, simply because they can't relate.

Standing by itself, many a textbook has often, initially at least, seemed as formidable as the tallest mountain. Often they are beautifully illustrated, handsomely photographed with scores of vessels over three football fields in length, and complete with charts and graphs that blur the eyes. Pretty. But, initially at least, unrelating. Even then . . . down but not out . . . the novice boater may carry the book home and stay up half the night eyeballing the text. Suddenly, he is horror-struck! The text looks far too involved, complex and complicated for his needs. He can't associate and, just hours earlier during initial contact, the instructor had failed to "dissect" the textbook . . . convincing him all pieces would soon fall into place. There is help available around this problem. I have found the wealth of boating info available in pamphlets, brochures and literature available from the Fish Commission, Coast





A boating class will teach you that bow riding might be okay at anchor in shallow water, but never when running. You'll have a better idea of what is required in the line of safety equipment; which knot should be used and when. Youngsters who generally ride along as passengers might be called upon to operate the craft in an emergency and will do well to avail themselves of as much boating safety education as possible.



Guard and other boating-oriented organizations is ideal to supplement textbooks. Covering almost every boating subject, these additions are usually written in simpler, more abbreviated form and serve as ideal introductory material to the meaty discourses that loom ahead.

What it really comes down to in the making of a successful boating course is the right combination. A top-notch instructor, a seriously interested student and the material tools to do the job. But, *the first night is the key!* What happens (or doesn't happen) *that night* will largely determine the success or failure of the whole course for not only the student but the sponsoring organization as well.

If all of this reads like a primer for instructors, that has not been my intention. It is really directed at those boaters who have been hesitant to take that first step into the "classroom." As one who preaches boating public education, I want you to know you have a right to demand from me a first-class presentation . . . you deserve no less! All dedicated instructors feel the same; and, by golly, *in very few cases will you ever be let down!* On the other hand, you, the student, must be prepared to give the instructor sufficient chance and time to not only sell you on the course but deliver the goods. Give him the opportunity to present the material, lesson by lesson, in a systematic manner that will unravel and unweave what may seem far more complex and involved than your boating needs may demand. In the back of your mind, be conscious of the fact that, no matter how limited or restricted your boating may be today . . . tomorrow has a magical way of opening up boating horizons that most men only dream of and few realize.

Editor's Note: For information on boating courses in your area, contact:

Pennsylvania Fish Commission or nearest Waterways Patrolman;

Director of Auxiliary or nearest Auxiliary Flotilla;

National Headquarters or nearest Power Squadron unit;

The American Red Cross or your local Chapter.

PENNSYLVANIA FISH COMMISSION HAS NEW OFFICERS –



Newly elected officers of the Pennsylvania Fish Commission, James J. Stumpf, President (left), William Cox, Vice President (center), join Executive

Director Ralph Abele in perusing Commission agenda. President Stumpf, of Laughlintown, Westmoreland County, replaces William O. Hill, of Erie. Vice

President Cox, of Elysburg, Columbia County, succeeds Stumpf who preceded him in that office during the past year.

GLENDALE LAKE PRODUCES WORLD RECORD AMUR PIKE –



Mike Chulyak, of Altoona, and Cambria County Waterways Patrolman Robert Kish examine Chulyak's record breaking Amur Pike. The 45-inch, 28-

pounder is believed to be the largest specimen ever taken anywhere with rod and reel. Native only to the Amur River basin in southeastern Russia and

northern Manchuria, they were introduced into Pennsylvania in 1968. Trolling a spoon plug produced the catch.

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THE EXTENDED TROUT SEASON



As this issue goes to press, trout anglers in Pennsylvania will be enjoying the second year of enlightened Commission policy extending trout season from Labor Day through October 31 with reduced creel limits. A decision to provide an extended season on all approved trout waters was made after due and deliberate consideration of all the social and biological factors which our staff felt would or could have any bearing on public reaction. The primary reason for an extended season is to provide a better and longer recreational opportunity for the angler who wants to fish from the beginning of the season to the end. We are offering an angling opportunity during a season of outstanding natural beauty and relative serenity along our trout streams.

We have had some criticism centered in one area that we would open more streams to poaching at this time of year and would disturb the spawning of the stream-bred trout. Perhaps the opposition comes because the idea for that locality is relatively new — but it certainly is not new for the rest of the Commonwealth. Prior to expanding this extended trout season to all approved trout waters, all or portions of 232 stocked streams, or roughly 25% of the stocked trout streams were open for the extended season in 60 counties. Interest in the extended season, shown by requests for more streams, had been growing and there was confusion in the minds of the average angler as to what streams were open during that period.

As to the objections on a local basis, there is no reason to believe that poaching will be any greater or any less due to the extended season. Unfortunately, we shall probably always have the poacher or outlaw with us — those people with a different set of rules, attitudes and standards of conduct than the average sportsman. The poacher is a thief taking a resource to which he is not entitled, but to judge the conduct of the average angler by the misconduct of a minority is unfair. During 1975's extended season we found relatively few anglers taking advantage of this bonus, but the presence of the honest fishermen on those streams probably acted as a detriment to the poacher.

Reduction of the number of brood trout also seems to be a concern. Actually the reproductive capacity of most trout populations exceeds the ability of the stream to support trout. That means many eggs are produced, but only so many trout will result. Angling pressure in the extended season is normally light, and the creel limit is reduced to three to emphasize the sporting aspect. This, combined with the relatively large number of potential spawners, and the capabilities of these spawners, makes us believe that the extended season will not harm the wild trout fisheries.

We think that the members of the Commission were wise in extending the trout season as they did. We think this is a responsible and objective effort to provide more varied fishing experiences for as many anglers as is compatible with the resources.

The function of government is not to restrict the many because of the trespasses of the few, but to protect the many from these same few who disregard the law, the people, and God.

Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

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Volume 45 - No. 10

October, 1976

CONTENTS

Susquehanna Smallmouths by Gerald Almy	8
Penns Creek by Dave Johnson	11
The Worm is Not Alone by Loring D. Wilson	14
The Bellefonte-to-Chicago String by Ken Corl	21
Conestoga, Small River — Big Surprises by Steve Mellinger	28
Beatitudes for Anglers by Carsten Ahrens	32

Our covers this month portray scenery we anticipate each year along Pennsylvania's waterways. The angler is more fortunate than most passersby in that he can fully contemplate its beauty at a more leisurely pace than can those speeding by on their way to — where?

Front Cover: Margaret Nichols fishes the Yellow Breeches.

Photo by Sylvia Bashline

Back Cover: Powells Creek photographed in autumn splendor.

Photo by Ned Smith

MONTHLY COLUMNS

FISHING OUTLOOK	2	ANGLER'S NOTEBOOK	23
LEAKY BOOTS	4	STREAM NOTES	24
TAKING A CLOSER LOOK	6	FLY TYING	26
CO-OP NEWS	22	ASHORE & AFLOAT	30

James F. Yoder, Editor

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fishing outlook

by george e. dolnack, jr.

The cooler weather of fall rejuvenates both fish and fisherman, spurring each into a frenzy of prewinter activities. On our major rivers and streams where the waters are now cooling, this is one of the most productive times of the year for the fisherman.

Seeing few anglers, but deserving more, is the underfished lower Susquehanna River in the Holtwood area where there is an abundant supply of fish that includes smallmouth bass, walleye, muskies and panfish.

The most popular stretch with the anglers is the tailrace section of the Holtwood Dam. This fertile water runs from the base of the dam to about 2½ miles downstream to the Fish Commission's newly constructed Muddy Creek Access Area that boasts a boat launching ramp, large parking lot and toilets.

York County Waterways Patrolman Bill Hartle picks October and November as the best time of year to fish Holtwood. He said that catches of 21-inch bass and two-foot-plus walleyes are not unusual. Though spring fishermen bring in some nice catches, fishing tapers off from June to September since little water is allowed to flow from the dam. This not only drops the downstream water level, but dampens the fishing as well.

Access to the west shore from Route 372 is convenient. A parking lot is located just north of the Route 372 bridge and is visible from the road. The river is but a few minutes walk away. Parking spots for a few cars can also be found along the dirt road between Route 372 and the dam breast.

The pool at the dam's base gets a lot of attention from anglers who cast their lines from the huge boulders and chunks of concrete below it. Bass, walleye, panfish and catfish are taken on minnows, crawlers and size 2 spinners.

Cast to the face of the breastwork where the water is churning and allow the bait to be worked by the current. When using spinners in the same place, start the retrieve as soon as the lure hits the water.

Wading fishermen score high on smallmouth by concentrating on the pools, pockets and faster moving runs found among the rocks. Minnows, spinners, humpback type lures and white and yellow jigs all catch fish, says Hartle.

BUT, a word of caution to the wader: the river level rises when water is released out of the impoundment from time to time and the shallows disappear on the way back to shore. A boot full of water will result, if you're lucky.

It's possible to fish the area between the dam and the bridge from a canoe when the water is not running too swiftly. However, the boat will have to be manhandled over the rocky embankment. Some of the other pools along the shore can be fished from the rocky overhangs up from the bridge. Shore fishing is also handy below the bridge.

Anglers launching their boats from the west shore's Muddy Creek Access Area off River Road, fish around the rugged islands dotting the river. They also make their way upstream towards the bridge which is in sight of the launching facility.

On the east side of the river, Harry Redline, Lancaster County Waterways Patrolman, says that tailrace fishing is limited to the Muddy Run Fishermen's Park which can be reached from Route 372 in Lancaster County. Although no boat launching ramp is available, cartop boats can be put into the water there.

Redline also says that anglers are passing up some excellent fishing by not taking advantage of the river's generous offerings in the Holtwood area. He said that fish takers include minnows, jigs, deep running tandem spinners, June bug spinners with a

crawler and deep running minnow type lures all catch fish.

Besides the fat smallmouth and walleyes, he said that muskies in the 40-inch class are being taken. "But," he continued, "some bigger ones are waiting to be caught!" To emphasize this, Redline said that while recently investigating stream conditions during an extreme water drawdown, he saw a musky that was at least 50-inches-long in one of the shallow pools.

Helping the fish to reach tackle busting proportions are the gizzard shad that abound in great numbers on the lower Susquehanna. The shad benefit all of the predator fish which feed voraciously on them.

In the eight-mile-long Lake Aldred pool formed by the Holtwood Dam, very little fishing takes place, says Redline who patrols it regularly. Two-thirds of the lake, he said is less than 30-feet-deep and very much fishable.

Because of the natural reproduction of fish in Lake Aldred, it can be considered a huge nursery. And it supplies all types of fish to upstream Safe Harbor.

From the east shore, about two miles below Safe Harbor, a public boating access area can be found at Pequea's Arrowhead Marina. If you put in here, Redline suggests fishing with minnows among the rocks below Safe Harbor for smallmouth and walleyes.

On the west side of Lake Aldred, Hartle recommends the Fish Commission's Otter Creek Access Area to anglers. Located several miles downstream from Safe Harbor, it is a favorite with fishermen. Hartle says that anglers haul in nice catches of smallmouth and walleyes from the creek area. Muskies and northerns are also fair game and they go for big plugs, he said.

At one time, before the power dams were constructed, the 43-mile, boulder-strewn stretch from Columbia to the tidewater was fast dropping rapids. Most of these rocks are now submerged, but many, particularly in the tailrace area, are close to the surface and can make boat handling tricky. And unless your motor is equipped with some sort of a prop guard, you'll risk tearing up the lower drive unit.



Shore fishermen find the pool below the Holtwood Dam (above and below right) attractive for a variety of fishing. Byong Song Oh, below left, displays his smallmouth bass. Catches of walleyes, panfish, and trout are also made.





THE WHOLE THING!

Please find check for \$7.50 payable to the Pennsylvania Fish Commission to renew my subscription to the Angler for three years.

I thank you for bringing it to my attention that the subscription was to expire. You have a great magazine going there.

My only complaint, and it is mostly with me, I pick it up and don't set it down till I finish the whole thing then a long wait for the next one.

Yes, I do use it for reference going back many times for many reasons. I want to take time now to express my thanks to all you people of the Pennsylvania Fish Commission. You do a good piece of work and you do it so well in so many different ways. Thank you.

EARL STROUP, JR.
Pittsburgh

INTERESTING INDEED!

After reading the Annual Report in the January 1976 issue of the Pennsylvania Angler, I thought your readers would find this information most interesting.

As a Fishing License Agency in Northampton County, we also issue nonresident and tourist licenses. Although the greater number of licenses purchased are by residents of Pennsylvania, "out-of-state" licenses sold included residents of: New York, New Jersey, Maryland, Connecticut, Ohio, Minnesota, Indiana, and Seattle, Washington. Also, Virginia, Alabama, Nashville and Chattanooga, Tennessee, Atlanta, Georgia, and Florida — all well known as "bassin' country"!

Senior Citizens "65 Plus" do not lay aside their fishing tackle. A good number of senior licenses were issued to persons ages 65 to 85; also, two gentlemen whose ages were 88 and 94.

I believe 1976 will be an even greater year for fishing in Pennsylvania. It started with the ice fishing season. More out-of-state people will be visiting our historical sites during this Bicentennial Year.

Our neighboring counties have much to offer — not only historically, but in the way of good fishing. The new lakes are easily accessible for the fisherman

who has only a few hours to spare or the boat fisherman enjoying a day on the water.

The *Pennsylvania Angler* has done a great service by informing the public of Pennsylvania fishing waters, both new and old. The photos are proof of the excellent fish catches.

MRS. MICHAEL J. QUIGNEY
Sportfishing Tackle
Bethlehem

COUNTERPOINT

I think Mr. Bob Gooch in his "Defense of Opening Day" (April *Angler*), must be writing satirically, that is, with his tongue in his cheek. But just in case he is serious, or in case your readers are taking him seriously, I am compelled to reply.

What takes place on the opening day of trout season in New York State and in Pennsylvania is an abomination of everything that a real fisherman holds dear, as everybody knows.

Mr. Gooch acknowledges the frenzy, the congestion, the limited space for parking or camping, or fishing itself. He admits there is no challenge in trying to catch freshly stocked fish. But he tries to make sense out of all this. He argues that fishing for stocked trout on this kind of opening day "is not demeaning." And he implies that we have to have it this way.

Well, I say it is *not* the way to introduce a youngster to trout fishing. And I can well understand my many good friends, real trout fisherman, who would never think of going to the streams on "opening day," or even during the first two weeks for that matter.

There is an obvious alternative to the horrors of "opening day." That is to have no opening day at all, but rather trout fishing all year round. I am well aware of the Fish Commission's argument that opening day promotes the sale of licenses and results in the necessary revenue; but I say let's try it the other way. Other states which have gone to year-round season have stuck with the program. It works!

Mr. Gooch is right when he concludes that "opening day in trout country is *Americana* that persists in the face of the current collapse of traditions." It is one tradition that ought to be abandoned, and the sooner the better. And besides, there is the matter of utilizing the cold water resource to a greater degree to serve a "put and take" stocking program and a growing number of fisherman. During reproductive periods consider closing those streams which are known to support a native trout population.

Some say that an open season all year round would favor the local fisherman. I

don't see how. The fellow who travels from Pittsburgh to Kettle Creek can go only so many times. He has the stocking schedule. Let him schedule his own opening day. What the traditional "opening day" system does favor is that most infamous of all slobbs, the pre-season poacher, a "local" whose numbers increase each year. What I propose would put him out of business.

Let's return the Pennsylvania angler to some sort of sanity, to some chance of peace and solitude on the mountain streams.

DONALD R. RODGERS
Indiana

Whether Mr. Gooch's article in the April *Angler* was sardonic or sincere, only Mr. Gooch can say. However, just as you felt compelled to reply to the article about opening day, I feel compelled to reply to your letter. You have made some rather broad generalizations about opening day to which I would like to respond.

I readily admit that the congestion and crowds that are attracted to many streams on opening day are not compatible with the angling ethic that decrees one arrive at streamside carrying a cane rod, wearing a funny-looking handmade Irish tweed hat or a Scottish deerstalker, and crouch (or kneel) on the bank peering intently at some point in space (it helps if you smoke a pipe but pipe smoking is not essential) and looking philosophical, then rise imperiously and announce to whoever might care that it is unquestionably *Caenis* and that the "sipping" rise indicates an 8x tippet will be required. I'm not saying all that happy nonsense isn't fun; it is and I love it, but I have all summer to thrash about on the streams looking as if I'm posing for an illustration in *Gray's Sporting Journal*. The opening day comes but once a year. Believe it or not, there's a whole world full of folks out there running about unsupervised who enjoy opening day and some of them are, shockingly enough, real trout fishermen.

If you find opening day objectionable, then by all means don't fish on opening day; but — remember opening day is a tradition — it is a subjective thing and at least some of those who go out and enjoy opening day are indeed real trout fishermen. There's a great deal to be said for the anticipation, the buildup of enthusiasm and finally opening day. (I'm not referring to license sales but to the individual experience which has nothing to do with financial gain or loss.) Passing judgment on someone else's values concerning desirable or undesirable aspects of fishing on opening day is pretty dicey business and boils down to simply a matter of opinion. I know that I enjoy

opening day, I look forward to it and I gain memories with each one.

I appreciate the general atmosphere that occurs on opening day can be distressing to someone who seeks solitude and a "quality" experience. I am sympathetic to your concern — I assiduously avoid fishing streams that have been very recently stocked simply because intolerance of crowding can constitute a limit to my enjoyment. This may seem paradoxical but what I'm trying to communicate is that the real problem you object to will not be solved by doing away with the traditional opening day. I like opening day and I don't blame opening day for producing the problem of too many people trying to fish at the same time. I say let's keep opening day because it is a tradition many enjoy and it is only one day out of the entire trout season.

Your obvious alternative, year-round season, may not be satisfactory since we still have the "horrors of opening day" each time we stock. You have identified the real problem when you mention, "... there is the matter of utilizing the cold water resource to a greater degree to serve a 'put and take' stocking program and a growing number of fishermen." Year-round season or closed season, it doesn't matter which, the problem will remain the same as long as angler pressure fluctuates in direct response to the stocking truck. In many cases, and I saw this during the first week of trout season this year, very fine trout streams are subjected to quite light angling pressure except during and shortly after an inseason stocking. A year-round season isn't going to solve that problem.

It is evident to those of us involved in determining management policies for our trout fishery that some aspects of quality have to be included as absolutely essential. This is no simple task since quality is one of those things we understand but which simply can't be measured or expressed in quantitative terms.

The Pennsylvania Fish Commission is making a strong effort for diversity which will provide the experience desired by all segments of the angling public. There is no "right" or "wrong" involved — who is to say that wild fish are noble or hatchery fish are demeaning? What is involved are efforts such as those to extend trout season with a drastically reduced creel limit, restrictive regulation and no stocking (Penns Creek, Big Spring, Letort), wilderness trout streams, and curtailment of stocking in some really fine wild trout streams.

The effort the Commission has made to emphasize "quality" or aesthetics has not always been enthusiastically endorsed by all the angling public. It is a slow and difficult process. In the past our management policies have been primarily in

response to trends and not an effort to initiate or promote trends. It is now apparent that we have a responsibility to provide the public with an opportunity to experience and evaluate some alternatives to simply catching a limit of stocked trout. Perhaps the tradition that ought to be abandoned is not the opening day but rather the persisting misconception that all trout come from a hatchery truck or that all problems can be solved by stocking more trout.

As you have undoubtedly perceived, this response is not really a rebuttal. The only major disagreement I have is that the problem is not opening day — whether we keep opening day (which I favor) or go to a year-round season, it won't correct the urgent social problems that are developing in relation to the catchable trout program. The Commission is aware of these problems and an effort is being made to consider all the needs of the angling public including those social factors which result in reduction in angler satisfaction. I hope you'll be patient and bear with the Commission, supporting their efforts to minimize these negative social aspects of the trout program. It's a complex and intricate problem involving more than simply changing allocations of hatchery trout or changing seasons. There is no overnight solution.

DELANO R. GRAFF, CHIEF
Division of Fisheries

MAKING PROGRESS

I just got back from fishing down below our house at Spring Creek and just had to write this up for the *Pennsylvania Angler* readers. I was fishing a pool with an egg for bait and watching a little girl on the other side of me watching her rod tip like a mother hen when I got a soft hit. I quickly set the hook and brought in a sucker. To make a long story short, the little girl went wild over the fish so I asked if she wanted it, as I throw suckers back anyway. She said she did and I gave it to her. She was so happy she gave me a kiss right there on the streambank! That little girl and the joy she showed over that fish made my day even though I didn't get one other hit the rest of the night. For even more good news, I couldn't find enough litter to fill my litter bag half-full. Just shows what a good job you all are doing.

BILL BARNHART, JR.
State College

We get the impression that, carrying a litter bag along, you're doing a rather good job yourself! Hang in there, others might catch on. Ed.

"FISHING WE LOVE"

I am truly sorry about letting my subscription run out. I am an avid fisherman and I found myself wondering why the *Angler* stopped coming to my house. I must not have noticed, or overlooked the renewal notices. It's a great mistake on my part. Consequently, I would like to renew my subscription for another three years. I enjoy reading the *Pennsylvania Angler* because you don't have to read about some fancy money-rich fellow who charts a big boat to catch some exotic fish, probably none of us will ever think about anyway. Instead we can read about the kind of fishing we all love and enjoy. I would also like to thank you for your cooperation on printing a few articles on eel fishing, which I had earlier requested. I truly like to read the *Pennsylvania Angler* and all of its articles.

Now, I don't know if it's possible but I would like my renewal to begin with the February issue. My last received copy was the January issue. I was looking forward to a certain article in February's issue. My appreciation would be with you people if you could convey this small request. It's not any major thing, as I wouldn't be put out any if this wasn't possible but it would sure be a fine thing to know I hadn't missed any issues along the way. Thank you truly for your help and any cooperation. Keep up the good work.

ARLAND ZEILER
Hamlin

We do our best to pick up an expired subscription where the subscriber requests, Arland, but sometimes we forget — other times it's impossible (especially if too much time has gone by). If we've overlooked your request, drop a note to Eleanor Mutch in our Circulation Section. Ed.

NEW SLANT

In reference to the article on worm "eviction" you had in the *Angler*, I found a solution a couple of years ago that works as good as your solution. But it is much safer for a minor. I found by taking black walnuts while they're still green, crushing them up in a bucket of water, and pouring bits of it on the ground where worm holes are, the worms come up like crazy. I don't know what causes it, but I think it burns their skin so I rinse them off in a bucket of water and they're as good as the worms you buy or dig.

KYLE W. GAITHER
Coopersburg



The graceful Osprey, above, the Belted Kingfisher, left, and the Hooded Merganser, right, all depend upon fish as a staple.



Taking A Closer Look

by Tom Fegely

PENNSYLVANIA'S FEATHERED ANGLERS

There are probably very few Pennsylvania anglers who fish for the sole reason of putting meat on the table. If we didn't derive fun and relaxation from our sport, not many of us would even bother picking up a rod.

But it's a different story when it comes to Pennsylvania's *feathered* anglers. A great variety of birds frequent our state's streams, ponds, lakes, and marshes for the sole purpose of catching fish or tasty side dishes of crayfish, frogs, or tadpoles.

One of the most familiar denizens of the waterways is the spunky BELTED KINGFISHER. This long-beaked, tousle-headed angler typically feeds on fish not utilized by man — such as creek chubs. It can be a real threat to hatchery fry, however, as a pair of these blue-gray birds will quickly diminish the population of a hatchery pond of tiny trout.

Streamside anglers occasionally have the opportunity to watch a kingfisher dive headlong into the water and emerge with a hapless fish in its beak. As it flies off to some overhanging branch on which to sit and down its catch, the kingfisher's rattling call can be heard.

The mergansers, also known as

"fish ducks," are characterized by a cylindrical bill edged with sawlike teeth that enables them to catch and hold fishes of rather large size. Three species inhabit Pennsylvania: the HOODED MERGANSER, the COMMON MERGANSER, and the RED-BREADED MERGANSER. The latter two species are almost entirely fish eaters and their flesh is not too palatable. The HOODED MERGANSER, however, varies its diet with aquatic insects, crayfish, and frogs and is better tasting than its cousins. Chubs, suckers, and a variety of minnows are the traditional prey of the mergansers although they are sometimes able to outswim small trout.

Pennsylvania's most powerful feathered angler is undoubtedly the graceful OSPREY. This is the only hawk that is entirely a fish eater. It catches unwary fish by a spectacular plunge and is sometimes robbed of its meal by the more powerful BALD EAGLE.

Unfortunately, the OSPREY is a



A Great Blue Heron pauses, apparently unconcerned, then suddenly dives for a fish it had been watching all the while, above. When alarmed, the Bittern, below left, "freezes," blending perfectly with its surroundings. The American Egret, below right, is often mistaken for an albino Great Blue Heron, but has black legs, yellow bill.



victim of past pesticide abuse, particularly DDT, and its populations have declined in recent years. It has been proved that the pesticides cause the birds to produce shells so thin that the eggs are unable to hatch. Since the OSPREY is entirely a fish eater, it is one of the first creatures to ingest the pesticides which accumulate in the water and are in turn taken in by fishes.

The most famous of all fish eating birds has to be the heron clan. What angler hasn't thrilled at the sight of a long-winged heron gracefully cruising above a sun-dappled lake?

The best-known heron family member is undoubtedly the GREAT BLUE HERON. It is able to catch and down fish up to a foot long with a lightning fast thrust of its sharp beak. When alarmed it typically voices its displeasure with a throaty "gawk" as it flies off to find some other, more secluded, place to hunt or rest.

The beautiful AMERICAN EGRET is often mistaken for an albino GREAT

BLUE HERON. It is entirely white with black legs and a yellow bill. The smaller and showier SNOWY EGRET is also an occasional Keystone State visitor. It is considerably smaller than the other two birds and is adorned with black legs and bill and yellow feet.

The EASTERN GREEN HERON seems to have been misnamed for its general coloration is more of a maroonish brown than green although it does show some iridescent green and blue on the crown. Its neck is comparatively short for a heron and it prefers to live a solitary life where it is least disturbed.

The BLACK-CROWNED NIGHT HERON is a beautiful but seldom seen member of the fish-eating fraternity. In fact, this red-eyed bird with the long, white plumes adorning its head includes fish in about 80 per cent of its diet. It is largely a night angler and is not averse to eating fish that are already dead.

The most unusual of all feathered anglers must be the AMERICAN BIT-

TERN. Even its diet is so varied that occasional meals of fish are interspersed with mice, snakes, salamanders, frogs, dragonflies and anything else small and careless enough to cross paths with it. The bittern is also called the "stake driver" or "bog pumper" because of the strange sound that it makes. When surprised in its marshy home, the AMERICAN BITTERN simply raises its bill skyward and freezes — its streaked breast blending perfectly with a background of marsh grasses.

A variety of other feathered anglers may be found along Penn's streams and shorelines. The LITTLE BLUE HERON, YELLOW-CROWNED NIGHT HERON, COMMON LOON, and a variety of waterfowl, gulls, and birds of prey all depend on fish as an important part of their diets.

Besides their beauty and the added dimensions that sighting one or more give to a day's fishing, these "feathered anglers" deserve every form of protection that we "unfeathered anglers" can provide.



Susquehanna Smallmouths

by Gerald Almy

It didn't look like smallmouth water to me. The bronzeback streams I was used to fishing in Virginia, such as the Shenandoah and Rappahannock, were much shallower and dotted with riffles every few hundred feet. Yet the Susquehanna at the Oakland Access Area looked uniformly deep, smooth, and devoid of cover.

However, it was a gorgeous mid-September day and I had a brand spanking new canoe just picked up from the factory in Marathon, New York, begging to be tried out. "Why not give it a go?" I prodded myself.

Not being able to think of a sound reason why not, I hoisted off the shiny aluminum craft, loaded up two spinning rods, a tackle box, paddles, and life vest for a quick session and stroked my way a quarter mile upstream.

So much for my instincts about what looks like smallmouth water! Three casts with a squiggly tailed $\frac{1}{16}$ ounce black spinnerbait turned up three walloping strikes from a trio of

sprightly, olive-hued smallmouths. The fish were not large. Two were about 8-inches, one a 10-incher. But all were thick-bodied plump specimens and each fought briskly against the limber ultralight spinning rod and 4-pound test line. Their healthy, well-fed condition indicated that they did indeed come from prime smallmouth habitat.

Once I had paddled upstream from the launch point, this became obvious even to me. The bottom was a maze of stone and rubble. Even a man-made shoreline rip-rap provided prime bronzeback hangouts. The rocky bar where I connected so quickly on the three frisky bass extended well out into the river, providing excellent foraging ground for feeding smallmouths in search of hellgrammites, crayfish, nymphs, and minnows.

This was no news to the bass. They must have been congregated on this shoal by the dozens. Before my luck ran dry at this one spot 11 energy-packed smallmouths had en-

gulfed the tiny spinnerbait and put on wild aerial displays, spraying droplets of water which sparkled and glistened in the shafts of autumn sunlight.

When things slowed up at this location, I paddled swiftly upstream toward an inviting riffle bordered by a deep green eddy. The spinnerbait was a little light for this deep, rapid water, but I decided to take a couple of casts with it anyway.

On my fifth cast the lure vibrated next to a submerged log midway back when a fish ripped viciously into the noisy intruder. Line peeled from the spool in short, sizzling spurts as a maddened fish rampaged back and forth, shaking violently on the end of the monofilament. He fought stubbornly and sullenly to start, but then made two spectacular leaps clear of the river's surface. My heart crept into my throat when I saw the fish erupt from the water.

This was the largest river smallmouth I had taken in some time. When I subdued him and stretched



"Wet-wading" is very popular on the Susquehanna River. A great deal of water can be fished; and, in relative comfort!

the fish out on the rocks for a quick photo, he measured a full 16 inches. It was an exquisite fish with deep bronzish-olive flanks and a pale creamy belly. The bar markings that are sometimes prominent on lake fish were subdued on this solid, dark river specimen. Its short, squat form suggested a nutritious diet and fast growth rate. I released this prize fish (along with his younger relatives) after taking photographs.

Fishing for smallmouth bass in rivers is a marvelous pastime. It's free, requires a minimal amount of equipment, and offers fast light tackle action with one of the greatest freshwater gamefish in the country.

With a pair of waders or perhaps a small johnboat or canoe, hundreds of miles of prime smallmouth bass waters are available to Keystone anglers. Because there are so many good bass streams in Pennsylvania, a major side benefit of river smallmouth fishing is solitude. With a minimal amount of paddle or footwork, it's usually possible to have

the whole river to oneself as far as you can see in either direction.

There are many small streams and larger rivers in the state which offer high quality smallmouth bass fishing, but topping the list has to be the mighty Susquehanna. This river ranks with the James, Snake, Shenandoah, Potomac and White among the top bronzeback waters in the country.

Numerous access points can be found along the entire length of the Susquehanna as she snakes her way majestically through Pennsylvania from New York to Maryland. If you find good shallows, wading is an effective way to fish; otherwise, a small johnboat or canoe is helpful. Often combining the two methods is the best strategy. You can use a boat to reach good wading areas away from the roads and then get out and cover the water thoroughly on foot. In the spring and fall, chest waders are usually required. But in the summer, wet wading in sneakers is a satisfying way to beat the summer

heat while you're fishing.

The bulk of smallmouth action on the Susquehanna, as on all bronzeback rivers, will come from fish in the 8-12 inch range. These are usually fish in the 1-3 year age class on this stretch of the Susquehanna, which indicates a very good growth rate for the smallmouths.

For fish of this size, light tackle and small, succulent-looking lures are preferable to heavy gear and big artificials. You'll find you tempt a lot more bass with these refined bite-sized offerings and thin lines for river smallmouths are actually more similar to trout in their behavior than they are to their relative: the largemouth bass. They can be extremely finicky feeders and prefer tiny, quiet-swimming tidbits to large noisy offerings.

Some productive river smallmouth lures include silver-bladed spinners, floating diving minnow plugs in the 2-3½ inch class, 4-inch plastic worms, jigs, and spinnerbaits. These last lures are

probably the hottest smallmouth tempters on the market today, yet they too should be chosen in the smallest, lightest weights available, $\frac{1}{8}$ and $\frac{1}{16}$ ounces being the best sizes.

Fly rodding can be a fun way to catch smallmouths if you find them in reasonably shallow water. Small olive and black poppers, hair bugs, drab-colored wet flies and streamers, and even large trout dry flies with bushy hackle will often do the trick. Since you'll be using fairly small bugs and flies, no hefty bass bugging rods are needed. Something on the order of a 6 $\frac{1}{2}$ -8 foot rod taking a 5-7 weight floating line (weight forward or level) is a good choice. Add a 7-9 foot leader tapering to a 4- to 6-pound-test tippet and you're all set.

If you're after the really lunker-sized bronzebacks, live bait is generally the way to go. Hellgrammites, madtoms (small catfish), crayfish, and minnows, all staple items in the diet of river bass, get the

nod in this department.

But whatever tackle and methods you choose, the Susquehanna is a good choice of water to try it on. There are plenty of willing bronzebacks, as well as a few other eager customers that might jump onto your offerings, as I learned later that September day.

Close to two dozen bass had fallen for my spinnerbaits in four hours on this stretch of the river, which I'd never fished before. But it was getting late and I had a long drive ahead, so I started drifting back toward the launch site, casting along the deep water near a sharp sloping bank with a deep-diving crayfish plug.

I was casting almost hypnotically, absorbed into a reverie by the beauty of the flowing river and surrounding mountains that already displayed a touch of autumn color. On just one such mechanical cast I worked the lure back, felt it as it rose towards the surface at the end of the retrieve, and was stunned out of my

wits by the apparition of a huge pale-green snake-like creature which lunged with his snout half out of the water at my plug more viciously than any fish I've ever seen. The primeval looking fish hooked himself, shook and thrashed raucously at the side of the boat, threw the hooks, and vanished in a matter of seconds.

Never having caught a musky, not in the least expecting one, and daydreaming as I was, in the split second when the fish suddenly appeared and struck, it failed to register in my mind: MUSKY! My instinct, taken by surprise as I was, was initially one of fright. The long, mean-faced critter appeared so suddenly and at such close range, and struck so violently that I was too stunned to react quickly enough. And he was gone. But the impression is etched permanently in my head.

Take it from one who lost out: never discount the unexpected when casting for bronzebacks on the Susquehanna.

This angler found his canoe to be a great asset while collecting this stringer of Susquehanna River smallmouth bass.





Penns . . . *a touch of wilderness*

Creek

by Dave Johnson

The Pennsylvania Fish Commission's commitment to an expanded land and water acquisition program is a real bonus for Keystone sportsmen. Established and projected Commission acquisition and development of lake and access sites are solid evidence of this priority.

Purchasing land suitable as lake sites or access points is tough and competitive, but even harder to find is a cold water fishery sustaining good populations of streambred trout. They're not making these anymore.

In recent years the Commission has acquired mileage on two of the best: Big Spring in Cumberland County and Penns Creek in Mifflin and Union Counties.

Big Spring is the location of the Commission's most modern hatchery. This great limestone remains one of the few sanctuaries

for large native brook trout (although we still have many remote headwater brookie streams where small fish are the rule.) A 1.1 mile stretch of this outstanding fishery is FISH-FOR-FUN water.

The latest victory (early '75) and perhaps the sweetest is the Penns Creek story. After years of hard bargaining — at times near collapse — this superlative real estate and walk-in trout water was saved from threatened private development.

In my judgment, this 416-acre tract has got to be among the most valuable realty owned by the Commission. Flowing through a remote and beautiful mountain valley is one of the mightiest limestone waters in the country. Blue Ribbon by any standard, its population of wild brown trout ranks it high among those waters where quality angling is possible.

This 3-mile project lies near the middle of Penns Creek's trout water.

Nearly all of the upper 30 miles, from its source in Penns Cave in Centre County to Glen Iron in Union County, is productive water and is regularly stocked with catchable brown and rainbow trout.

Water temperature seldom exceeds 74° fahrenheit. An excellent pH factor of 7.5 and high conductivity provide ideal conditions for

the propagation and growth of brown trout.

Since the Thirties, I have had the chance to fish and study this stream. Skipping a hitch for Uncle Sam, 1942-45, I've waded and fished, at one time or another, most riffles and holes on the creek. (And got dunked plenty too.)

As a boy, when school was out my brothers, Fred and Van, and I fished every day — sometimes all day. Luckily we had a cabin on the creek and a father who understood.

Oh, we did some other things too — even chores, sometimes (Penns does get terrible muddy now and again!).

Most of the Project water was unstocked in those days (still is) because there were no roads. We early discovered the remote fishing was as good as the more easily reached and readily stocked water.

The "head" of trout was very good and fishing pressure less. (We never dreamed then that wild trout populations are repressed when mixed with large numbers of hatchery stock.)

Thousands of anglers who rejoiced that the Commission had acquired the "Winter Stretch" were hopeful management could protect its unique qualities: natural fishing in a remote setting.

The Commission received great encouragement from environmental organizations to adopt special regulations that would place emphasis on fishing for *sport*, rather than creeling trout and the necessity of having catchable trout stocked.

Trout Unlimited, the national organization dedicated to the protection of America's remaining cold water fishery, spearheaded the struggle to save this resource from a strictly put-and-take management. The local R.B. Winter Chapter, named for the late Raymond B. Winter, from whose estate the tract was purchased, and the Penns Creek Chapter fought the battle in the trenches.

It was, incidentally, T.U. that made possible the acquisition of the old Penn Central RR grade (paralleling Penns Creek all the way) by the Department of Environmental Resources from the Nature Conservancy, as a nonmotorized wilderness trail.

The Commission's fisheries technical nonmotorized staff agreed. In meeting its objective of providing an enlightened and varied recreational fishery, they have initiated a constructive program that recognized the need to manage for wild trout with no stocking of catchable size fish.

This special regulations area is open to artificial lures only (spinning gear or fly rods) with a creel limit of one trout, 20 inches or longer. Wading is permitted, but fishing after dark is not — assisting in realistic enforcement of regulations. This *modified* FISH-FOR-FUN section is open year-round.

No legal-sized trout will be stocked. It was originally suggested that fingerling trout might be planted in the future if Commission studies determine that they were needed to maintain an adequate population of resident fish. It is now apparent that, precluding a natural catastrophe — such as several poor recruitment years in succession — that will not be necessary.

Early surveys (summer '75 and continuing this year) were most exciting. Employing the electroshock method, results show the head of trout averaging over 150 pounds per acre of water.

That figures to over 350 catchable sized trout per acre — 2 to 3 times more than would usually be placed in stocked water subject to moderate pressure. Wouldn't be surprised to see that increase to over 200 pounds per acre, placing it among the very best. Here's why:

Since 1972, when the former FLY-FISHING-ONLY regulations were

terminated, this stretch was under statewide rules, permitting all legal angling. The trout really took a pounding. (1974 was the year of the 17-year locust in Central Pennsylvania. Anglers made a killing.)

At the same time the new management plan was established on Commission property, landowners downstream and adjoining the new facility leased their water under similar FFF regulations. With this added $\frac{7}{10}$ mile, the special regulation water spans some 3.9 miles — making it the longest FFF refuge in the state! (The boundaries are identical with the former and once popular Fly Stretch.)

Now before you tear off for this angling delight I would caution that Penns Creek is no setup! When it's good it can be very good, but often it can be as tough as any I've seen. At times it's impossible. Either because rains in the upstream farmlands have painted it red, or, as sometimes happens in early Spring, there's just too much water. The white water enthusiasts take over then, so it's not a total loss!

Outside the special regulations area bait fishing gets the nod. Minnows take some of the heaviest fish. But worms and salmon eggs are good early season bets, especially for the stocked brown and rainbow

Penns Creek offers the trout fisherman just about anything he might want in water . . . long placid pools, or . . .





fast riffles with cover-providing obstructions. Penns Creek provides the angler with an exciting wilderness challenge.

trout you'll find in Penns.

The special attraction for many anglers these days are the superior fly hatches. Caucci and Nastasi (Compara-hatch fame) told the writer they thought Penns Creek had "one of the best cross sections and populations of the mayflies that one could expect to see in the limestone streams in Pennsylvania."

Al Troth, noted entomologist and nationally famous angler, believes it has the best and most varied insect life he's found anywhere. (Troth moved west a few years back and knows what he's talking about — having fished Penns Creek for about 20 years.)

Caddis fly hatches are the thickest I've seen anywhere and the boys in the know consider the stone flies about as consistent a producer, year round, as are the mayflies.

Plentiful minnows, crayfish, dace, chubs, and hellgrammites make Penns a great natural laboratory for the production and growth of its population of brown trout.

Better know it can be a real buster. Not only are the currents tricky and deep; but, those rocks! Oh, those *goonies*! Brother are they slick. You'll fall sometime . . . make no mistake about that. Hobnails or carpeted soled boots are order Number 1.

When is the best time to fish Penns Creek? Normally May and June and again during September and October. But nothing's normal about Penns Creek.

Often it is too much of something: Too muddy, too high, too low, too cold, too warm, too many flies, too windy or just too bad.

Charlie Fox, the Letort Squire and renowned angler-author, frankly admits Penns has been his "toughest stream."

Dr. Alvin R. (Bus) Grove ("The Lure and Lore of Trout Fishing") knows Penns Creek well. He considers it about as good a tester of the angler's bag of tricks of any water he's fished in America.

But we all come back because we know the fish are there (what more can you ask) and some day we're going to "hit" it right and have a field day . . . maybe take one of those old lunkers we're confident are in there.

Fly hatches occur throughout the spring, summer and fall, but the really great emergence for the myriads of may, caddis and stone flies "usually" extends from late April through the middle of June. (Last spring was an exception as unusually mild weather and low water advanced most hatches as much as a week or two.)

The famous Greek Drake (locally called the Shad Fly) hatch may be expected over Memorial Day weekend, but I've seen flies on the water as early as May 20th and as late as June 15th.

Fishing in the fall can be most rewarding. The weather is lovely and the rush and push of early season is behind. And maybe, I think, the trout are a little less selective and easier to fool with a fly. What's more, fishing is often best during the middle of the day!

All of Penns is open for the extended season (to October 31) and most of it can be good. We have found one place about as productive as another.

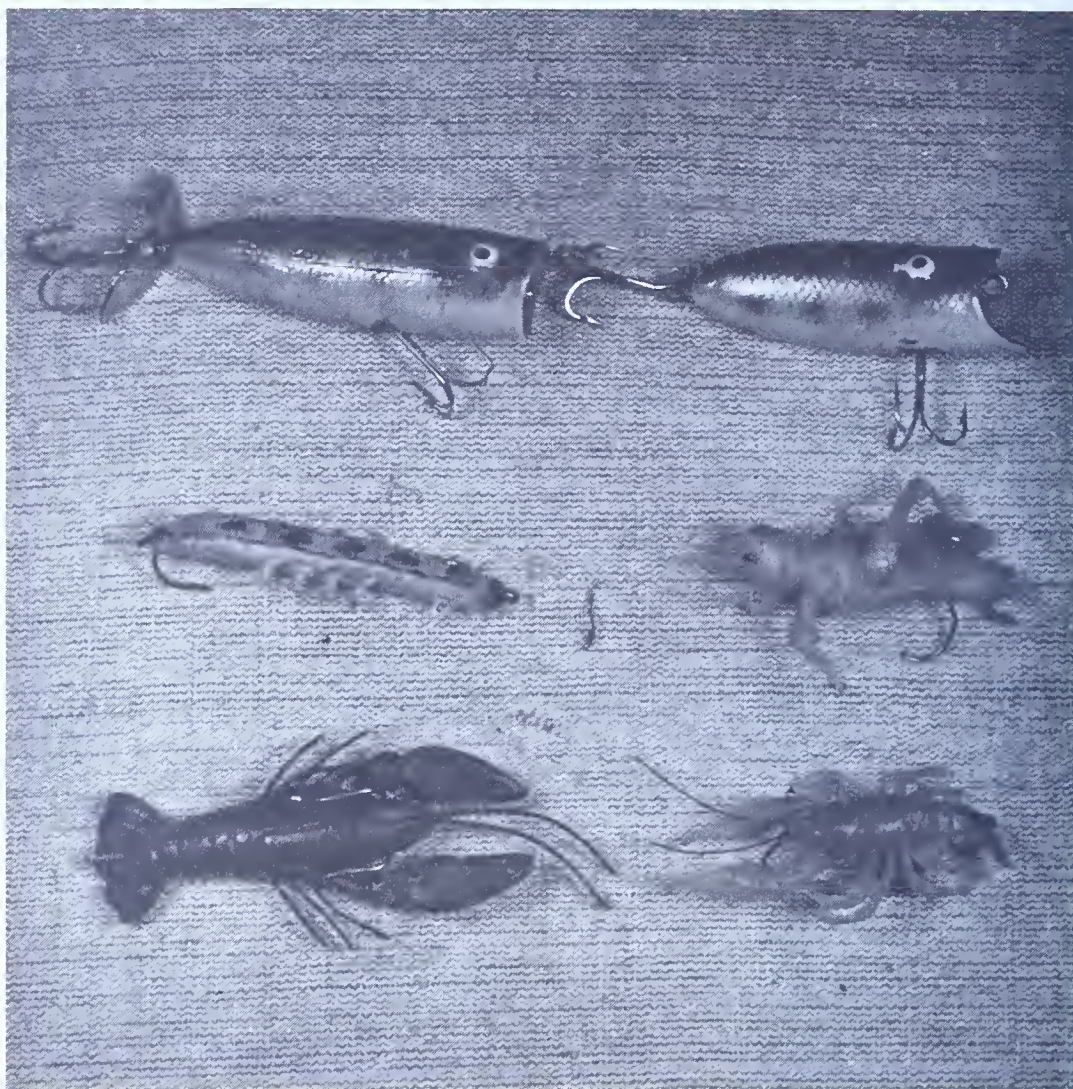
Last fall my brother Fred made a point to fish various sections of Penns Creek regularly. His luck was about as good one place as another. He did well far down to Trails End and Pardee and well up past Coburn — where Penns and Elk Creek meet, and around Spring Mills.

Anyway, give it a try. Remember though, I didn't say it was easy. I'm hoping it never is too easy. But it's got 'em, that I'll say.

So it will. As long as dams won't flood it; channeling doesn't gouge it, and people don't pollute it. And present enlightened management prevails.

the worm is not alone

by loring d. wilson



Ask any really dedicated bass anglers the identity of their most effective lure, and you will invariably hear “plastic worm.” Much of the time this is preceded by the word “purple,” but there is sufficient disagreement on the subject of worm color across the country to make the choice more open to disagreement. Of course, there are some old die-hards who still prefer plugs, spoons and spinners, but no real bass man denies that the plastic worm is very effective.

The major problem with this sort of philosophy, however, is that it is extremely limiting. An angler of my acquaintance (that is, he regularly fishes the same waters that I frequent) uses nothing but plastic worms. Admittedly, he varies the color to suit the water conditions; but, his tackle box looks like a compost heap gone wrong. It is full of worms of all lengths, colors, and textures. Two plastic boxes hold worm hooks and slip sinkers, and a plastic envelope contains a few weighted weedless hooks and jig heads.

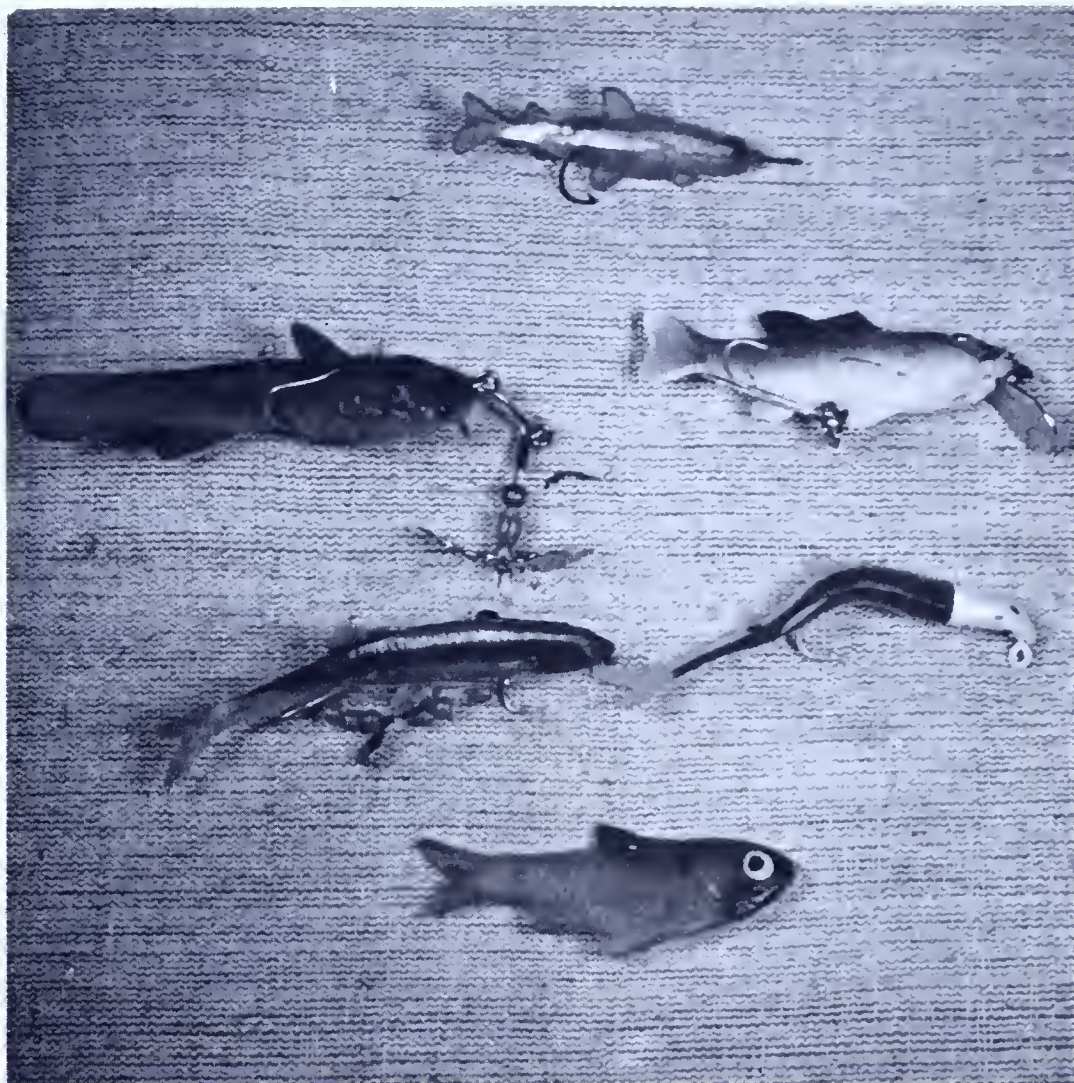
The end result of this one-sided attack upon the bass is that I have outfished him several times, and my success has had nothing to do with more refined technique. In fact, I was using soft plastic lures myself on many of the occasions — but the difference between us was that, after the worm hadn’t been touched in an hour’s casting time, I started changing lures, not just colors. On one of those days the bass were apparently feeding on baby bullheads, and a soft plastic catfish produced by my search for the right lure turned the trick. The imitation accounted for six bass in a little over an hour, and when the bass hit, they set the hook themselves.

Surprisingly enough, not many bass fishermen make full use of the tremendous variety of soft plastic baits available. Many fly fishermen are quite familiar with soft plastic nymphs, and use them to great effect, but too many of the larger soft plastic lures are passed over in favor of hard plastic or wood plugs, or metal hardware. The fact is that bass like it soft; that is, when a bass

“feels” a lure, he likes it to feel natural. In the case of very hungry or angry bass that smash a lure, the soft feel isn’t necessary, since the fish is well-hooked before he can spit out the bogus bait. But when bass are feeding more carefully and selectively, which occurs more frequently than most anglers realize, they only mouth the bait and can spit it out before the angler realizes that a fish rather than a weed has interfered with the retrieve. That, of course, is the theory behind letting a bass run with the plastic worm; the soft plastic feels alive, so he hangs on to it while he is running, and in the process will literally chew it into his mouth so the single head hook can be set.

Well, the worm works fine when bass will take it, but bass feed normally on other types of food. We don’t know why the bass take worms at all; certainly, a worm is not likely to be crawling along the bottom of a freshwater lake, and where in the world have American bass seen a purple, fluorescent red, or yellow-and-black polka-dotted

Conventionally shaped plugs as well as imitations of practically everything that swims, creeps, or crawls are now available in soft plastic material which seems to be appealing to gamefish.



real worm? My personal belief is that bass take worms solely due to curiosity; if a bass is actively feeding he will take the food he is used to, rather than striking solely out of curiosity.

Just about all of the natural food can be duplicated with soft plastic artificials. In order to simplify matters, these soft plastic artificials can be divided into four general categories: Fish, amphibians, insects, and eels (don't write to the magazine; I am already aware that an eel is a kind of fish — but for the purposes of this article, we are grouping them differently.)

Fish make up a tremendous part of the bass' diet. I have opened the stomachs of several bass in the spring and summer to find them packed with partially digested threadfin shad, and at these periods there are several imitations that will take bass as nothing else will. Realistic shad imitations are available in bulk, without hooks. These are most effective when fished with a 4/0, 6X long hook threaded through the body and brought out 1/2''

in front of the tail, either trolled along the shoreline, or cast along the edges of weed and lily pad beds. There is also a lead-headed alewife imitation, which looks quite a bit like a shad, the hook curving at such an angle that the body is bent, and gy-rates like a crippled minnow trying to get to the surface when the lure is jigged along the edges of drop-offs. The best method of fishing this type of lure is to cast it to the edge of a drop-off, and work it slowly over the edge. Bass will often strike the instant the lure starts to drop into deeper water.

Most of the lure companies manufacture soft plastic minnow imitations, from silver shiner to black-nosed dace, in both rigged and unrigged models. These minnows are always effective, and in the smaller sizes will take not only bass, but crappies as well. They have no inherent action of their own, and should be retrieved in short jerks of the rod tip. Reel sporadically, with the rod tip pointing toward the lure, and alternate twitches of the rod tip to the right and left. With this man-

ner of retrieve, the minnow looks like it is chasing microscopic bits of food in the water — a very natural appearance if you have ever had the occasion to watch live minnows in action.

The soft plastic catfish mentioned earlier is, perhaps, one of the most effective soft plastic minnow imitations ever developed. Shaped exactly like a baby bullhead, even down to the barbels, these lures take bass in any waters where catfish are found. They come in green, brown, and silver, the two former having yellow bellies like the real fish. The silver is not as effective as the more realistic green or brown cats, but works its best in murky water, where the added brightness catches the attention of the fish. These lures have spinners attached ahead of them, and double hooks which protrude downward from the rear of the belly. Although the spinners add extra flash in muddy water, I prefer to remove them and just crawl the unadorned baby cat along the bottom slowly, with occasional sideways twitches. To do so, in snag in-

fested water, I rotate the double hooks so that they point upward, making the baby cat virtually snag proof (why in the world their creators don't manufacture them that way I'll never know; it doesn't decrease the hooking ability of the lure in the least!). This sort of retrieve with the modified plastic cat accounted for a seven-pound bass from a small impounded pond several years ago — a lake that was supposedly "fished out".

In addition to the catfish and various other lifelike minnows, there is also a series of soft plastic plugs available. These are made of the same sort of material as the other soft plastic baits, and are fished in the manner of normal plugs. But they do have advantages over their hard plastic or wooden relatives. First, when they hit the water, the sound is more of a soft splat than the louder splash of the hard plugs. Second, I have noticed several instances in which a bass will "nudge" a plug before striking. This is especially true in heavily fished lakes where bass get wise to standard lures. When the bass nudges the soft plugs they feel real, and strikes usually come immediately. In order to insure those strikes, watch the retrieve carefully. If the water bulges or dimples anywhere near the plug. Speed up the retrieve for about two feet. This gives the impression, I suppose, that the lure has suddenly noticed the bass, and has decided to hightail it out of there fast. No bass can resist striking a potential meal that is escaping.

It is impossible to finish the section on minnow imitators without mentioning a soft plastic imitation, very accurately done, of a small bass, a factor that plays upon the cannibalism of the fish. It comes fully rigged, and possesses a wiggling plate which contributes to a very natural swimming motion in the water. Since small bass generally stay close to heavy cover, this lure is at its best when fished around the edges of grass and lily pad beds, fallen trees, and in stumpy water. For an exposed hook lure with a wiggling plate, it is surprisingly snag free, but it won't come *through* pad beds without snagging, so when fishing the pads keep the bass imitation



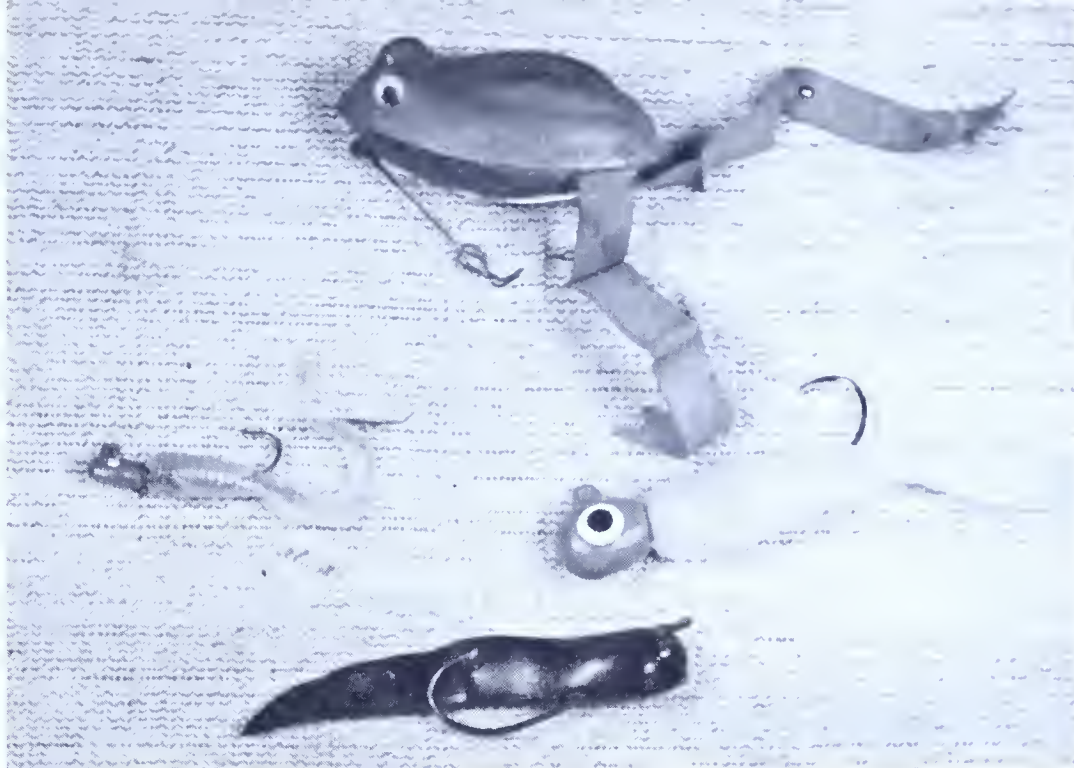
Heavy shoreline cover can be fished effectively with plastic imitations.



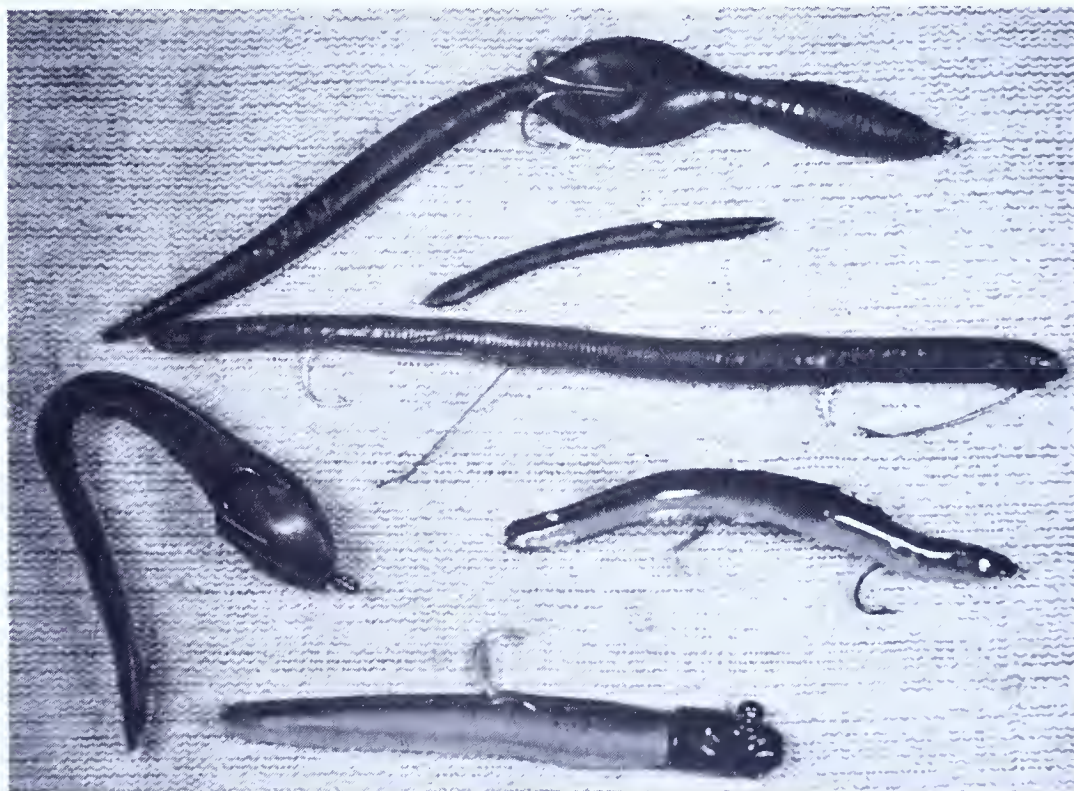
to the outer edges. These imitations are made in four colors, but the black and the natural finishes are the only ones I have personally found consistently effective. I wouldn't be caught without them, especially in the spring.

Another soft plastic bait, which is currently beating the bejabbers out of the plastic worms, is the grub jig. I'll put it here with the minnow imitations, because I can't figure out what else it could possibly resemble. The grub jig consists of a single hooked lead head, behind which is attached a soft plastic round body with a flat tail. It is jigged along the bottom in sharp, upward jerks, or trolled with a pumping action that makes it rise and fall in the water as it moves along. I have also had excellent success with the grub jig by crawling it slowly across the bottom of a lake. Apparently bass take this retrieve to be a crawfish. They take the lure gently when it is moving slowly, and although they seem to like the feel of the soft body, if they hit the lead head they'll spit the lure out. Watch for the slightest change of direction in the line at the surface of the water, and the instant it occurs set the hook, hard. You'll lose a few lures to snags, but the lures are inexpensive, and you'll pull out some whopper bass. These jigs come in sizes from $\frac{1}{8}$ oz. to 1 oz., and in just about every color made for plastic worms. The best colors are white, yellow, purple, chartreuse, and green, and bodies can be purchased separately so that you can change the color of your lure without untying your line from the jig head.

Since the slow retrieve of the grub jig resembles that crawling motion of the crawfish, let's take a look at the crawfish imitations. These tiny freshwater relatives of the lobster are often sold as live bait when they are in the soft, shedded stage. Several of the soft lure manufacturers put out crawfish imitations, and since all are modeled from the real creature, they are all about equally effective. The lure should be cast onto the shore and crawled off. Use a few split shot if necessary, because the imitation should hug the bottom all the way back to the boat. Bass will often follow these lures for several yards before taking them. In



Pictured here is just a small assortment of the lure shapes available.



fact, the plastic crawfish was the cause of one of my most interesting experiences, and also of one of the most unorthodox methods of catching a bass I have ever used.

I was fishing Pymatuning Reservoir in Pennsylvania one summer afternoon, and the water was relatively clear. I had had decent luck, and was casting the imitation crawfish into some brushy tangles when I noticed a wake following the lure. It was a bass, a five-pounder, and he traced that crawfish back to the boat three times without taking. Finally, with my heart in my mouth,

I reached for my musky rod, which had seen plenty of service but no action that day. I cast the crawfish again, let the bass follow it a fourth time halfway to the boat, and stopped it. The bass lay in the water above it, watching to see what it would do next. I stuck the rod in a holder, and cast an eight-inch musky plug well past the bass on a slight diagonal, and began reeling it slowly in. When I brought it close to the crawfish, I started cranking fast to make it dive. The bass shot down and grabbed the crawfish, as I had hoped he would, and then turned

and struck the musky plug! I had one fish on two lines . . . but I finally had him!

In the line of soft plastic insects, there are only two of interest to the bass caster — the catalpa worm and the grasshopper. Fishing these lures is simple. Just cast them up close to shore under overhanging trees or rushes, and twitch them on the surface just enough to give the impression of a struggling insect. These lures are at their best in late summer, just about daybreak. At those times the bass have moved into the shallow water under overhangs for shade and food, and they are used to taking insects.

In the amphibian category, spring lizard or salamander imitations are readily available, and are exceptionally effective throughout the warm weather. Some of these come without rigging and are fished on weedless hooks in the same manner as plastic worms. They are made in several colors, and the wiggle of the legs seems to attract bottom feeding bass even when they won't take worms fished in the same manner.

Some of the baits look only vaguely like real salamanders, coming in the most outlandish colors you have ever seen, but they sure work, apparently for the same reasons that the worms work. There are also salamander imitations that are far more lifelike in appearance, and when the water is low, or especially clear, these are the ones to use. Bass can be just as selective as trout, and the dedicated bass angler should never let that fact out of his mind.

Tadpole imitations are fished in the same manner. These are small, simple plastic baits, and should be threaded on a single, weedless hook. Cast them right into weed beds, branches, and lily pads, and retrieve them in short, sporadic twitches, allowing them to sink slightly between jerks. These lures are deadly in the spring when there are lots of real tadpoles around; their effectiveness falls off in midsummer when all but the largest tadpoles have metamorphosed into frogs.

But the soft plastic frog is a lure whose effectiveness never fails. If frogs are anywhere near bass water,

the bass will be used to eating them — you can count on it. Just about every company that manufactures soft plastic baits puts out a frog or two. One, a heavy froglike body with folded, thin, gum rubber legs, gives the most realistic swimming action I have ever seen. All of the frog imitations will catch bass with regularity, but the frogs with legs that kick when retrieved are the best of the lot. Bass, when taking top water lures, go by the sound and the silhouette more than anything else, and those legs kicking backward as the frog moves forward, and then retracting close to the body when it pauses, simply cannot be beat.

Whatever plastic frog you use, make certain that it has a weedless hook. The best method of fishing the frog is to cast it onto the shore, or on top of lily pads or stumps. Flip it off into the water with a soft splat, and start working it toward you. If the frog is being worked in a pad bed, let it rest on the pad for a few moments before launching it, and whenever it comes in contact with another pad, pause, as though the frog were de-

Both aquatic and terrestrial imitations have proved to be good "medicine."





A 4½-pound largemouth that took a plastic bass fingerling close to shore.

bating whether or not to climb out of the water. Bass will usually strike during those pauses.

The chief disadvantage of some frog imitations lies in their hooking arrangement. The legs on some of these work the water well, but the hooks protrude upward between the frog's hind legs to make them weedless. This works all right if the frog lands properly, but if it lands belly up on a pad or on shore it is going to hang up. A homemade weed guard may help to alleviate this problem.

In the category of eel-like lures we have, of course, the plastic worm. So much has been written about this lure that there is nothing more to be said. But other eel imitations can be just as effective, if not more so, in certain cases. In this category, some are rather small, and similar to grub jigs, splitting the difference between the grub and the plastic worm. They are fished in the same manner as the grub jigs, and seem to do better when the water is clear. Similar to these, but far more deadly, is the swimming elver, or young eel imitation. This is a 6" to 9" eel

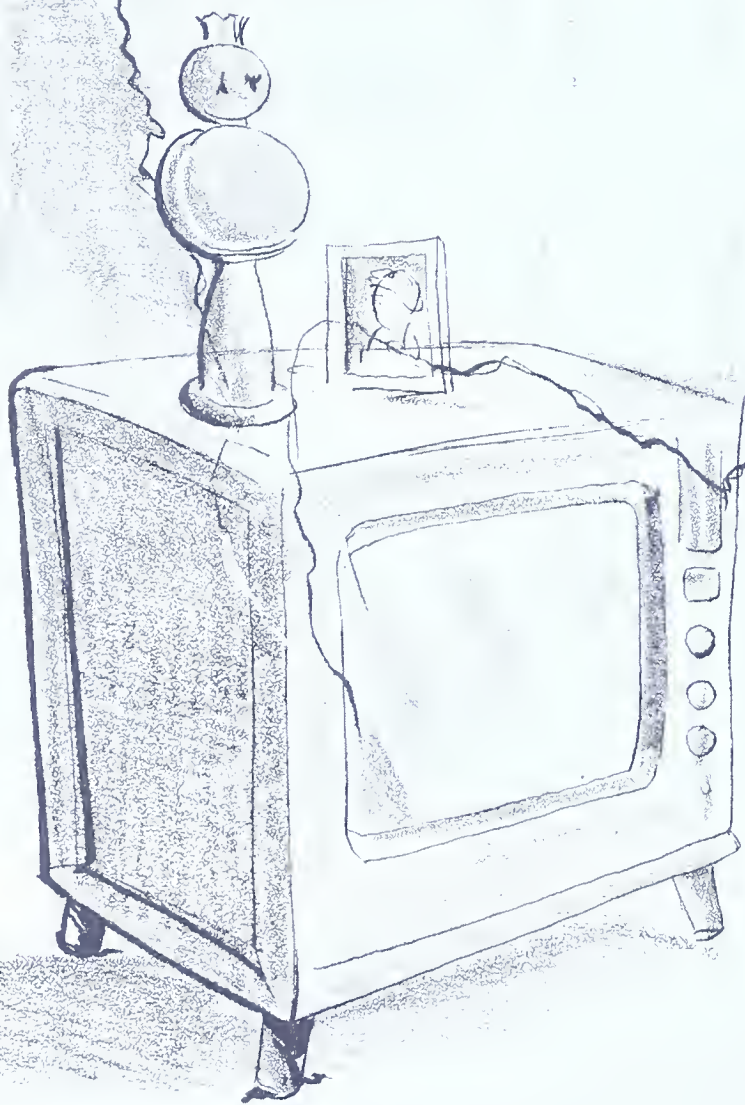
imitation which works along the bottom seductively with a weighted metal lip providing the sinuous swimming motion of a live eel. Although they aren't weedless, the upward pointing hooks generally keep them free of snags when used in relatively open waters. In places where bass make live eels a regular part of their diet, these eels are deadly. The gray, the blue, and the black are the most effective colors, although the red and the amber produce well in murky waters. They are the lures to use in hot weather when the bass are deep, and they account for some real lunkers when fished slowly along the bottom.

Finally, we come to the leech and the lamprey. The leech is a small, soft-bodied lure with a weighted head and a bent body that makes it look like an inchworm measuring a stalk of goldenrod. It is weedless, and is best fished in very shallow water around stumps and submerged trees. Fish the leech even slower than the plastic worm. Like the minnow and eel imitations, the leech is effective year-round, and I have

taken bass on it in the middle of December when the air temperature told me I should be home.

The lamprey is a small lure with no action of its own. It will account for bass when the water is clear, and when fishing over sandy bottoms. As it comes from the factory, the hook protrudes from the bottom, but I generally change this arrangement so that the hook extends from the side. This is a lure for open shores and streams rather than cluttered lakes, and, while dynamite for smallmouths, is not as successful on largemouths as some of the others mentioned.

Don't be suckered into believing that the worm is *the* lure for bass. Add a selection of the other soft plastic lures to your tackle supply — particularly the elvers, frogs, and a few minnow imitations — and the next evening that some worm fisherman at the dock grins and says that they "just weren't biting," grin back and ask him to help you lift that lunker onto the dock, because you strained your back playing and releasing so many others!



M. Rosato

The Bellefonte-to-Chicago String

by Ken Corl, Chief
Trout Production Section

In the quiet of a Sunday evening while the boys were attending a Youth Meeting, the wife was visiting a favorite aunt and the tube was being energy conscious, there was an excellent opportunity to stretch out on the recliner and relax. It was the thought of *stretching out* that brought this particular fishy subject to reflect in my subconscious . . . not the tropical fish cavorting in the aquarium at the opposite end of the living room.

While "zzzz's" were escalating toward the ceiling and dissipating into the quietness the subconscious laid out the following tale. Just how far would the trout production of the Pennsylvania Fish Commission stretch, from head to tail, in single file, if placed in that manner on I-80? For one thing, they wouldn't reach Jimmy the Greek for a heads or tails bet!

Anyway, Bellefonte was a likely place to begin owing to its proximity to I-80 and the fact that a hatchery is located there. The nearly one million adult trout produced at Bellefonte would extend from the Bellefonte

Exit (24) to within approximately 13 miles of the Pennsylvania-Ohio border. Westward Ho! On we go with the adult trout reared at the Benner Spring Station sliding along for another 77 miles to a point just west of Exit 11 on I-80, south of Cleveland. Add the adult trout from the Huntsdale hatchery and you can stop for lunch at Toledo (two miles east of Exit 4). Continuing our "trout line," we add those from the Big Spring hatchery and find ourselves in the Hoosier State. As a matter of fact, we find ourselves 11 miles beyond the first exit inside the Hoosier border. Four down and six to go; so, once again, Westward Ho!

Stringing out the adult trout from Reynoldsdale extends us 53 miles further west to a point three miles east of South Bend. Adding those from Corry places us at Exit 5 of I-80 in Indiana. The remaining 68 miles west are the result of production at Oswayo, Pleasant Mount, Tionesta and the Linesville Silo. Approximately 54 miles of these adult trout will place us in the Chicago Loop. Ah, a 14-mile bonus just in case we

lost our course. Of course, if you had your "druthers" you could have strung these trout out between Pittsburgh and Boston or possibly Philadelphia and Detroit.

By the way, "*just one more thing*," a quote from Columbo, the Pennsylvania Fish Commission had to feed these fish in order to produce this Bellefonte-to-Chicago String. Should these trout have eaten exclusively from a 5/32" pelleted worm, this worm would have to have been 10,878 miles long. One would have to dig from here to China to find one that long.

Slam! Bang! The boys are home! I'm certainly pleased there was time to collect that string of trout and place them back in their raceways where they belong — at least until it's time to place them in the streams for Pennsylvania anglers. Speaking of raceways, the Pennsylvania Fish Commission trout rearing facilities have seven miles of 8- and 10-foot-wide raceways in operation now and by 1980 should add another three miles. If you would care to make all those raceways one foot wide you could have a continuous facility 90 miles long.

Oh well, figures, figures, figures. With the household quieting down again, possibly more sweet dreams. Maybe even a dream of catching a limit from that "Bellefonte-to-Chicago String."

CO-OP NEWS

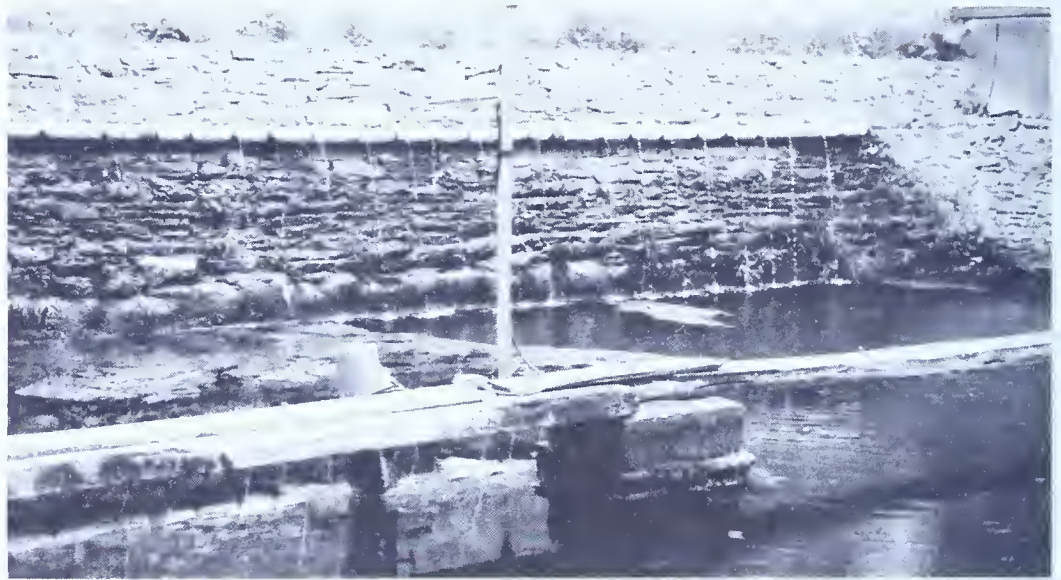
by Bill Porter

Lake Wallenpaupack, high on a lot of anglers' and boaters' lists, was not on the approved trout stocking registers. Something had to be done about that. And something was. The Wallenpaupack Trout Club came into being and had a nursery site approved in 1971 with the intent of making the lake a trout fishery. To put it mildly, the Wayne County based organization has had success with their trout project if nothing more than the pleased fishermen, who have been netting their product.

A closer look at the site and physical layout of the nursery is needed. The initial water source is a series of impounded springs. Additional water is caught and an aerated pipe dribbles it into the main intake system. And a note of caution is in order, a slippery walkway (when it's raining) bridges some gaps over about eight feet of very clear and very cold water before it passes out of the cement-walled enclosure into the rearing tanks.

And while on the subject of water, the club has had some nitrogen and oxygen problems at different seasons of the year. To compensate for this gas factor, two minnow-savers have been installed to agitate the water when needed. At the time of our initial visit in late May, there was no need to use them with most of the trout having been stocked or stolen. And let's treat both of those two items separately.

First the stocking: According to our host, Barry Stockler, all trout raised by the club go into Lake Wallenpaupack. Now this would seem to be a simple task for the nursery runs its water directly into the lake. Not so — the club has gone to elaborate and imaginative means



Impounded spring water in the foreground, above, is from eight to ten feet deep. Below, photo shows series of steel holding tanks.



to distribute its fish, allowing them to find their own homes in the large body of water. Helicopters have been used, probably an "only," as well as a "first" for all cooperative nurseries. The first time the "chopper" was employed, much attention was given to the event by area citizens and the media — all justifiably so. The procedure was to fill a "basket" under the aircraft and have it carried out over the lake and lowered into or near the water, releasing the fish. This reduced the concentration of fish (and fishermen!) as the fish were forced to spread out, seeking their best habitats. Boats were used by club members in the same pattern. Approximately 10,000 browns and rainbows a year help fill the anglers' hopes and successes since the club entered the program. Barry expressed the hope for a number of

club members that some natural reproduction will occur.

Now to the second item, thievery: The Wallenpaupack Trout Club has been plagued with vandalism and "troutnapping," as have most clubs in the program, on an increasing scale. Members added lights to little avail. A camera setup failed to work one time. Later another camera rig must have worked too effectively and the thieves were aware of its presence. Anyway, to make a sad tale sadder, the camera vanished along with some trout and insult had been added to injury. At the time of our visit in late May, Stockler showed us the remains of ripped and torn screens, the work of some vandals on the nearly empty steel holding tanks.

On to some better issues, the steel tanks mentioned above are stair-stepped down the hill from the im-

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Members of the pike family, from chain pickerel to muskies, are masters of ambush. They lie quietly in weeds or other cover and wait with remarkable patience for a minnow or other prey to come within striking distance.

Very small minnows, not more than two inches long, are top crappie baits. Crappies are basically fish eaters. Their mouths are comparatively small, so large minnows are not effective. Also, the minnows must be lively and hooked so that they can move about in the water.

Use the smallest spinnerbaits you can get in streams, small lakes, and ponds. The big models are effective in large deep lakes and impoundments, for which they were originally designed, but little ones are better in smaller waters.

To interpret the readings on your stream thermometer, remember this simple formula: Fish will be found in deep areas when the water's surface temperature is colder than 45 degrees and also when it is warmer than 75 degrees. They will be roaming all over the water in temperatures of 55 to 70 degrees.

About 800 species of caddis flies have been identified. Obviously, it would be impossible to design a fly to match each species. The Adams fly, however, is a good all-purpose imitation of the caddis.

Dawn and dusk are top periods for fishing for bass with surface lures, but not the only good times. In the middle of the day, particularly in late summer and early autumn, bass often feed in the shadows of weeds, lily pads, stumps and docks where the light is shaded out and where the surface water is comfortably warm.

Even a small piece of weed or grass clinging to the hook of a lure will turn the fish off. When fishing in weedy water, it is wise to examine the lure frequently, even after every cast, to make sure it is clean.

Erratic motions of a spoon used in pickerel and pike fishing are the key to the effectiveness of the lure. The actions of the spoon give it the appearance of an injured bait fish.

Hard-braided casting line is better than soft-braided line in at least one respect. It is less likely to be damaged by contact with rocks and stumps.

An open-face spinning reel, with a line testing not more than four pounds, will handle lures weighing as little as 1/64th ounce.

Best way to fish a floating plug that dives down into the water on a steady, fairly fast retrieve is to reel it in fast for a short distance, then stop and allow the lure to come to the surface, then reel fast again, and once more let it surface. Often a strike will come when the lure is nearing the surface or just after it begins floating.

Bearings of a casting reel should be lightly oiled every couple of hours during a full day of fishing.

A fish has a clear view of any lure fished under the surface of the water, so exact imitations of insects and minnows are effective. But a fish sees the shape and size of a surface lure, more than its color, so the floating fly or bug should be chosen with that fact in mind.

Spoons and spinners used in pickerel fishing are most effective when worked in open water along the outer edges of weed beds or in pockets of open water in weedy areas.

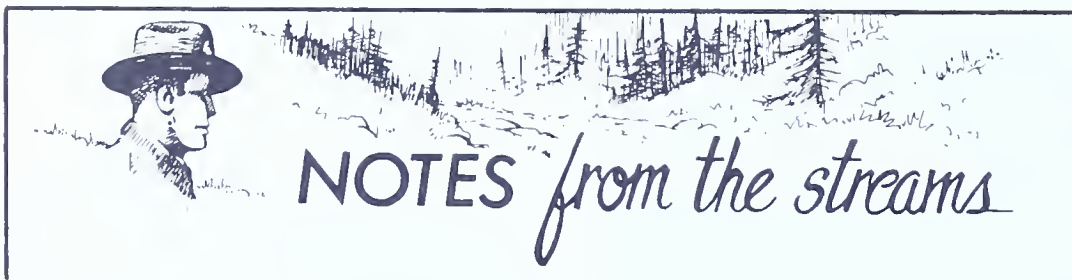
pounded springs. There is control of the water levels in them and screens furnish debris and normal predator control. Feeders use pellets and some venison, a standard but effective diet.

Sherwood Krum, club president, and Ralph Vosburg are some of the other key members in the nursery project. There is good rapport with the community and the visiting sportsmen. Finances do not seem to be a problem with labor, materials and cash contributions coming along as needed.

The only dim light on the whole project for Lake Wallenpaupack is the few thoughtless individuals who seem bent on spoiling a very good thing.

Torn screens are typical of the continuing vandalism which faces the Wallenpaupack Trout Club.





YOU THOUGHT "JAWS" WAS BAD?

While checking fishermen along the Swatara Creek, near Jonestown, I stopped to talk to a family. When I asked the father of the group how the fishing was, he told me it wasn't very good at all. He then told me why he thought the fishing was poor. It seems that about a half an hour before I arrived, he saw what he thought was a log drifting towards the shore. But, to his surprise the "log" opened his mouth snapped it shut and headed for deeper water. The "log" as sworn to me by him and his family was a small alligator. He then asked what he should do if the alligator returned. For the life of me, the best I could come up with was, if he should come swimming back throw rocks at him to scare him off. Or, if he took the bait, hang on for dear life. I also explained that the alligator is not a native to this area of the country.

Ralph Price
Deputy Waterways Patrolman
Lebanon County

HOWDY, NEIGHBORS!

Anyone whose job requires them to move often knows how hard it can be to meet your neighbors when you first move in to a new area. I recently found a surefire remedy for this mover's dilemma. Shortly after moving into my new home, I kept the glass-sided fish display truck in my driveway overnight between shows. As you may well imagine, I now know every person within two miles that has the least little interest in fish or fishing!

Robert Lynn Steiner
Waterways Patrolman
S/Luzerne County

CLEAN-UP CREW—

While talking to a fisherman, who was in the process of cleaning a limit of trout along the Little Lehigh Creek, I noticed gathered around us about a half dozen anxious looking bystanders. These on-lookers, Mallard ducklings, about six-weeks-old, had not been in the world very long but had received good training from their mom. They knew from experience that the fisherman was preparing a banquet for them and they were ready.

When the angler was finished and left the trouts' entrails in the water, the ducklings rushed in splashing and gulping. They devoured their luscious meal in about thirty seconds leaving not a morsel behind. There are hundreds of ducks in this area and they do a nice clean-up job. That is, as long as they stick to the leftovers and leave the tasty part for the fishermen!

Fred Mussel
Waterways Patrolman
Lehigh County

TO WHERE?

Here's a little story that Angler readers might enjoy, at least maybe those readers that are familiar with Lake Raystown.

While on boat patrol on Raystown Lake, in Huntingdon County, Deputy Waterways Patrolman Bob Hoenstine and I approached three fishermen in a boat who were obviously having a grand time. During the course of our conversation, we found that they were from McKees Rocks, Pennsylvania and that they were enjoying the fishing and the scenery on the lake. The men had rented the jonboat for the day, and were staying at a local motel. They said they were enjoying themselves so much that they were planning to stay another night and inquired as to where they could do some fishing from shore.

Forgetting that they were not familiar with the local area, I suggested that they "go to Aitch" (pronounced "H"), and they would enjoy fishing there. One of the fellows in the boat looked at me square in the eye and said, "The same to you fella!"

After a great laugh and an explanation of the "Aitch Access," and that this was not meant to be "H" — or whatever he was thinking it meant — we had another great laugh and proceeded on our way. As we left, we discussed how this job can also be a lot of fun, too.

Rubard T. Hudy
Deputy Waterways Patrolman
Huntingdon County

QUANDARY!

Ronald Duke, Ryerson Station State Park Superintendent, tells this story about his Samoyed dog. While doing

some work on one of the small streams that flow into Ryerson Lake, Ron heard a commotion upstream where he had last seen his dog, "Sue Bear." He saw the dog come out of the water dripping wet, and noticed something in her mouth. A closer look revealed it was about a 10-inch white sucker, which was thrashing about between her jaws.

Ron goes on to say that during the spring months when many trout are caught, his dog catches her share too. She lies in wait behind an individual who is catching fish, and when one is momentarily left flopping on the bank, Sue Bear rushes up behind the unsuspecting angler and takes off with his fish.

I've been debating whether to charge Ron with using an illegal device to take gamefish, or charge Sue Bear with fishing without a license!

Gary E. Deiger
Waterways Patrolman
Greene County

BALLAD OF ECOLOGY

by Claude Kanter

*There once did flow a crystal spring,
pure water undiluted.
Alas! This spring has come
unsprung for it is now polluted.
Where once clear water, cool and
free, did gush forth undefiled,
Its mossy brim with sundry trash and
beer cans now is piled.
I hope this song is not too long, nor
yet too sad and bitter;
Yet if some day the human race,
should vanish without e'er a trace
Tis clear its final resting place will be
beneath its litter.*

Donald Parrish
Waterways Patrolman
Beaver County

GOIN' OUR WAY?

A waterways patrolman's duties not only include stocking fish and checking creeks, etc., but sometimes arrests are made for which the violator is other than the general public or normal type fisherman.

Recently an arrest was made for fishing prior to trout season in a stocked stream for which the violator paid no heed to the citation issued to him and a warrant of arrest was issued for him.

In fact, the violator had been in jail several times after the citation was issued for numerous crimes such as robbery, etc., so a fishing violation was of little significance to him.

It just so happens he was observed hitchhiking by several of the Armstrong County Deputy Waterways Patrolmen recently. And, you guessed it, he got

the ride he wanted: *straight to the magistrates office* and thence to the Armstrong County Jail for 67 days!

Jim Smith
Waterways Patrolman
Armstrong County

ALL OVER!

Deputy Rich Hendricks and I were on motorboat patrol of the Ohio and Beaver River when we stopped a boat for a minor violation. A woman on the boat remarked, "*Gee! There are State Police on the highway and now we got them on the river, too!*"

Rich added, "*They have them in the air, too!*"

Ed Teck
Deputy Waterways Patrolman
Beaver County

BARE FACTS!

Recently, Deputy Waterways Patrolman James Rice ran into a rather unusual situation while on patrol of Tipton Run in Blair County. Jim was patrolling the stream when he apprehended a man for littering and his wife for fishing without a license. The two violations were not unusual in themselves; however, the man's attire certainly was. The only thing that he was wearing was a smile — more than likely a smile which did not last too long! Actually, we could have written up a third violation: "*Failure to display his license.*" I might mention in passing that this same man was prosecuted two times last year for fishing without a license; he was wearing clothes on both of those occasions!

Walter A. Rosser
Waterways Patrolman
Blair County

REVELATION!

It is always suprising to see how many trout hold over in stocked trout streams in this state — even when these streams are supposedly "fished out".

The Kishacoquillas Creek in Mifflin County is probably the hardest fished trout stream in my district. This stream is really hit hard by the fishermen up through the last inseason stocking. Even I would have been hard-pressed to state that there were many trout left after the onslaught of spring and early summer. I have had my mind changed and my eyes opened by an event that took place just the other day.

I had a chance to go on a stream survey excursion to the "Kish" with a team of biologists from DER. This was done as part of a general survey of the Susquehanna River watershed. The sur-

vey station was in a stretch of water that is fished as hard or harder than any other on the entire stream. A length of about 100 yards was electro-shocked to determine what species of fish were present.

Along with the expected suckers and other rough fish and minnows, about 50 brown trout were recovered. At least 20 of these trout were in the 14- to 16-inch range, most of the remainder were 9 to 12 inches in length. Along with these fish were about 10 fingerling trout about 3- to 4-inches long. Two or three 17- to 18-inch brownies were also recovered. All were released.

All of these trout were brilliantly colored, indicating that they had been in the stream for quite some time. The fingerlings indicated natural reproduction. Perhaps some of the large trout were hatched in the stream and raised literally right before the eyes of the many fishermen who fish the stream, having never been caught.

On top of all this was a real bonus. As the team was shocking the water they turned up a real whopper American Eel. This fish, in my estimation, would be a new state record of at least four feet in length — if caught by legal angling methods. It was as big around as a man's arm. In fact, it was too big to get into the nets of the team! They couldn't retrieve it for measuring, although they tried for about ten minutes.

Because of the presence of this trophy fish I am hesitant to reveal its exact whereabouts. I will say that it is below Reedsville, in the stocked area of the stream. She probably won't be there for long, though, as her size indicated she was mature and should start heading downstream to the ocean to spawn, as instinct dictates.

Larry R. Baker
Waterways Patrolman
Mifflin/Juniata Counties

REFRESHING

The Poor Man's BASS Club, of Allentown, and the Carbon County Chapter of BASS recently held a mini-tournament at Leaser Lake, in Lehigh County. We patrolmen would be out of a job if everyone behaved as these sportsmen did.

All of their boats had registration numbers perfectly displayed. Life saving devices were in plain view on every boat and many fishermen wore them — even though the lake was calm. They fished very hard for eight hours in the rain, and even though few bass were landed, there were no complaints. After fishing under less than ideal conditions from 6:00 a.m. until 2:00 p.m., all the members re-

turned to shore, carefully measured and weighed their catch and returned them unharmed to the water. After seeing other fishermen over the years measure and keep nine-inch bass, it was a revelation to watch these BASS members release all of their fish, including a couple 3- and 4-pound beauties. These fishermen take nothing from the waters they fish except a good time and a few memories. That's better than taking a limit any day.

Fred Mussel
Waterways Patrolman
Lehigh County

LONG TRIP!

Due to Blair County's rather close proximity to the new Raystown Dam in Huntingdon County, I have been getting a lot of calls for information about the fishing and boating at Raystown. Some of the calls have been from pretty far away. I had one call the other day which has to be the topper. A gentleman from one of the local industries called to find out where he could get fishing licenses for four men from Russia. It seems that these men were to be in the area on business and wanted to do some fishing. I have been very curious as to whether Waterways Patrolman James Valentine, who handles the Raystown area, checked them out on the lake. I would have loved to have seen his expression when he checked their licenses!

Walter A. Rosser
Waterways Patrolman
Blair County

CLOSE ENOUGH?

On the opening morning of last trout season, prior to the opening hour of 8:00 a.m., Deputy Waterways Patrolman Ron Reedy walked to a hole on the North Fork of Pine Creek, and was standing among several fishermen awaiting the opening hour to start.

At about 7:55 a.m. a boy of about 10 years of age was just next to Deputy Reedy and yelled to another fisherman nearby, "*Uncle Charlie, what time is it?*"

Uncle Charlie replied, "*5 till 8.*"

Then the boy replied, "*I am going to start fishing anyway because it would be time to start before a 'Fish Warden' could get here anyway.*"

Officer Reedy was no more than 10 feet from the boy and had a hard time to keep from laughing!

Jim Smith
Waterways Patrolman
Armstrong County

Fly Tying

A Parachute Sedge

by Chauncy K. Lively
photos by the author

In the order Trichoptera the British make a distinction between caddis flies, which build larval cases — and sedges, which do not. American entomologists make no such differentiation between the two, preferring to channel all Trichopterans into the single designation of caddis flies. Of course, entomologists are concerned only with the insects' scientific names and common names such as Spotted Sedge, Little Yellow Caddis, etc., are significant only to the fly fisher who is interested in general identification. Descriptive common names assigned by fishermen often overlap several species and generally are applied only to flies of value from an angling standpoint. This is fortunate; in the North American continent there are more than 600 species of Trichoptera and if common names were allotted to all, I'm sure total confusion would prevail. In the British Isles, where fewer than 200 species are extant, and where the entomology is rather uniform over the limited geographical expanse, many caddis/sedge species are also known by common names which have survived several centuries of use by anglers and entomologists alike.

Despite the unreliability of com-

mon names in the vast entomology of our country, I think it is of value to the fly dresser, if not to the entomologist, to categorize Trichopterans as either sedges or caddis flies. The tyer is generally interested in representing the significant forms in any given insect's life cycle and the applicable designation of sedge or caddis would indicate whether the larval form is a "naked nymph" or cased larva.

In recent years caddis flies/sedges have received more than customary attention from fly fishermen. It is said that Trichopterans can survive in water too polluted for the more delicate mayflies and stone flies; thus, they are the insects of the future, at least insofar as meaningful fishing hatches are concerned. It is a sad commentary on the deterioration of water quality and in certain areas this is undoubtedly true. Yet, in relatively pure streams where a variety of aquatic insects flourish, the Trichopterans receive their share of attention from trout, often in preference to more exotic forms.

Spring of our Bicentennial Year saw some exceptional hatches of sedges and caddis in western Pennsylvania. Not only did we encounter them in good numbers but we had many similar reports from anglers on other streams. On the FISH-FOR-FUN water of Slippery Rock Creek there was a continuous three-week period of this activity in May and it furnished excellent fishing. Several species were represented but the dominant hatch was a tannish little sedge of the genus *Hydropsyche* which was on the water several hours nearly every day.

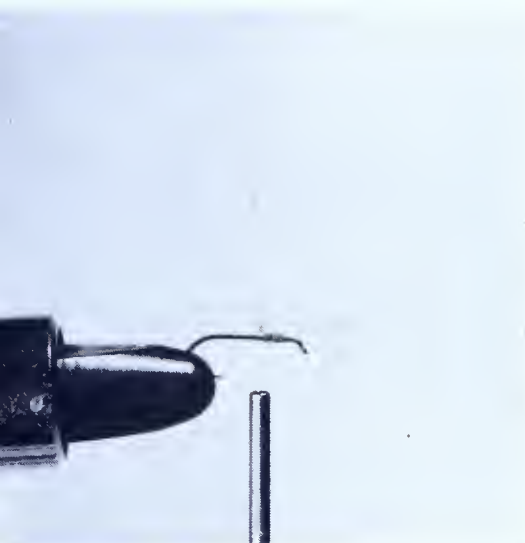
The larvae of *Hydropsyche* build

finely woven nets, funnel-like in shape, which are attached to rocks in swift water, opening upstream. At the rear of the net is a shelter of tiny pebbles or vegetable matter, to which the larva can retreat. The net not only assists in camouflaging the larva's residence but it serves as a food catcher as well.

The excellent hatch on Slippery Rock Creek gave me an opportunity to experiment with a new sedge dry fly pattern, born of the current hackle shortage, and the results were gratifying. Previously I had tied the tent-winged flies with open-palmer hackle, clipped above and below the body, and they worked well, indeed. But even the sparsest of palmering requires two hackles and I discovered that my irreplaceable prime hackle was diminishing at an alarming rate. The solution was a sedge with the hackle dressed parachute-style, which makes the most efficient use of a single hackle. The hackle is wound around a nylon anchor above the thorax in the same manner as in several spent spinner patterns we have previously described in these pages.

Not only did the Parachute Sedge float as well as the previous palmer ties, it presented practically the same light pattern on the surface film and was equally effective. Too, on days when the trout were taking the naturals as they skittered across current, I found that the flat, parachute hackle permitted activating the fly without dunking. Although the Parachute Sedge described here was intended to represent the little *Hydropsyche*, the general design lends itself to any caddis type, with appropriate changes in size and color.

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Editor's Note: After a four-month hiatus, Chauncy K. Lively resumes his series of informative and well-illustrated articles on the fine art of fly tying. "Welcome back, Mr. Lively!"
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TYING A PARACHUTE SEDGE:

Clamp a size #16 dry fly hook in vise and bind yellow tying thread to shank well behind eye. Double a 6'' strand of 4X monofilament and form a loop by knotting the doubled monofil. Bind loop to top of shank as shown. Allow about $\frac{1}{16}$ '' between knot and shank.



Trim off excess ends of monofilament. Then spiral thread back to bend and wax about 2'' of thread next to shank. Apply a dubbing of tan fur or synthetic to waxed thread.



Roll fur around thread with fingertips and wind dubbing forward to form a tapered abdomen, ending at monofil. Select a light ginger hackle with barbule length about twice the hook gap. Strip off lower webby barbs and bind stem to shank, as shown, with glossy side of hackle facing downward. Trim excess hackle stem.



Grasp tip of hackle with hackle pliers and wind around monofil, under knot, in counterclockwise direction. Make each turn underneath preceding turn and tie off. Trim excess hackle tip.



Pull nylon loop forward and down, straddling shank and pressing front barbles back. Then tie off monofil and cut off excess.



Apply a little more dubbing to thread and form thorax in front of hackle. Tie off, allowing space for winging behind eye.



For wings, cut a single section of light turkey quill about $\frac{1}{4}$ '' wide. Hold tip with hackle pliers and coat all but tip with vinyl cement or acrylic lacquer.



Fold quill section along its length and tie in by its uncoated tip. Wing should be tent-shape, extending back over body. Trim end of wing at angle, as shown, to create rear notch.



After whip-finishing behind eye and lacquering head, Parachute Sedge is completed. The pattern represents one of the small *Hydropsyche* species.

"Conestoga"



The Small River . . . with the big surprises

by Steve Mellinger

It was a warm Sunday in spring when a couple of my friends and I were fishing the Conestoga River in Lancaster County for early season bass. We were standing side by side casting away our small plugs and spinners into the clear, rocky water, trying to tempt a hungry bass.

The action started to pick up about 4:00 p.m. when one of my buddies landed the first fish of the day, a scrappy 12½" largemouth on a small darting plug. We were using ultralight spinning gear along with

6-pound-test line for these fish.

After the fish was released, I cut off my plug and put on a little george spinner to see how the bass would react to it. After making my first cast, I started to retrieve the lure. When I made two cranks with the reel handle, I had the most shocking, violent jolt I ever had in all the years I've been fishing. As I set the hooks, the heavy fish started coming towards me, real slow like, and was hugging the bottom like a huge carp. I didn't know what I was playing tug

of war with, but I knew one thing: it wasn't a bass! After a while, the big fish came to the surface. Just inches under the water, my anxious friends and I witnessed a long greenish gold body thrashing wildly, then making a mad dash downstream.

After putting my eyes back in my head, I knew I was in for a long hard fight with the musky at the end of my line. Fifteen long minutes of listening to my reel scream and the water splashing, the fish started to tire. Finally, my one buddy, Drew, dipped the net under the fish and lifted it out of the water. At last I reached my goal of a lifetime, catching a musky on ultralight tackle and I wasn't even fishing for it at the time. After measuring and weighing the fish, we took a few photographs of it, then I released the 16-pound spawning female so her offspring could provide more musky action in the years to



More picturesque in its rural meanderings, right, and at the Fish Commission's Rock Hill access, above, good fishing according to the author, is available "not far from downtown."



come . . . at least I hope so!

The Conestoga supports many different species of fish such as sunfish, crappies, bass, pike, muskies, catfish and carp. The carp are plentiful and grow very large in the river and the most popular baits used for them are doughballs and corn.

If it's panfish you're after, try small plugs and spinners for large bluegills and crappies. Fly fishermen have a ball with their flies and poppers. For fast action you just can't beat it.

Let me describe the Conestoga a little better for you. In most places, it averages about three feet in depth. Some places drop fast — up to twenty feet, so you have to watch where you're wading. The bottom is rocky and some areas are very brushy. The water is calm in most places but there are two waterfalls and below them lie some long riffles ideal for smallmouths. The Conestoga is only about 60 to 70 yards at the widest . . . not much of a place for a partyboat, but some people do

launch canoes there and ride all the way down to the Susquehanna River, which is about twelve miles away! The stretch of the Conestoga I'm telling you about is near the Lancaster City Water Works, just a mile east of downtown Lancaster and is easy to locate.

The Conestoga is well known for its fine bass fishing. Some real nice size fish were taken there over the years. Just last spring a young boy caught a 5½-pound largemouth. Also, some monster smallmouths were taken — and I do mean monsters — like my brother's 24-incher taken on a streamer back in 1967. Too bad it was out of season, it might have been close to a state record fish. We didn't weigh it, but I would say it was pretty close to 7 pounds!

The bass school up along the rock walls at the Water Works and are easily tempted. They prefer plugs that rattle — like the Rebel Wee R and Cordell's Big O.

Ever since the flood in June 1972,

many "freak" fish were caught (meaning fish that were not stocked), such as trout and walleyes. Trout up to five pounds and walleyes up to five pounds were taken after the flood. The freakiest of all was a 22-inch bowfin taken on a live chub by a local fisherman! What's gonna be pulled out of there next, nobody knows!

For best results, fish the Conestoga in the spring, summer and early fall. As far as fishing in the winter goes, you can forget it! The water moves a little too fast for ice to form so you can't go ice fishing. I tried winter fishing one time and I couldn't get *anything* to hit.

So, next time you get the urge to wet your line, be good to yourself and give it a try at the Conestoga.

(Editor's note: Formerly known as the Conestoga Creek, the waterway officially became the "Conestoga River" April 23, 1974 as a result of Earl F. Rebman, Conestoga Valley Association, petitioning the U.S. Board of Geographic Names.)

Speed regulation sign is large enough, but some still miss it!



Ashore & Afloat

by Gene Winters

Now that summer has become discarded pages of another year's calendar, the boating season is over for many. Even for the most enduring, telling signs of autumn and the winter that is sure to follow already peep over the horizon. Hopefully, you are among those who will find the chills of winter warmed only by pleasant summer memories: cruising . . . fishing . . . skiing . . . bankside rendezvous . . . a summer romance. Pleasant recollections that will tingle cheerfully like bubbly champagne through the sunshine-shortened days ahead. For some the season will have been, like most things in life, a labyrinth of ups and downs with good memories most prevalent. But for others the

months ahead will ring with memories not so pleasant . . . boating experiences that bordered on the unfortunate, if not the tragic.

If your summer boating memories fall into the "so-so" or the unfortunate category, the months ahead would be ideal for some soulful self-appraisal. Especially if you are "the skipper" does the responsibility for corrective action weigh heavily upon your shoulders. When it comes down to the wire, there can be one and only one "Ship's Master." With ever-increasing numbers of boats on a finite amount of water . . . safe and pleasant boat operation is a demanding vocation. The clearer the skipper's mind, the more practiced and trained he will be, the greater the chance of safer and more pleasant boating for all concerned. What captain would not feel pride in knowing his crew and guests have complete confidence in both his ability and capability? True, at times others are expected to "back up the skipper," but the final responsibility rests with the one in command: *the one at the wheel.*

Some boat operators have little knowledge or appreciation of what makes a *good* skipper. Recently, the Pennsylvania Fish Commission took a giant step to this end, in an attempt to reach the mass boating public. In a move that rates national recognition, the Commission mailed out *free* to every registered boat owner in the state, "Pennsylvania Basic Boating; A Guide for Better Boating." Not just another handout, this Guide is in reality an outstanding complete home-study course. It consists of an 80-page workbook consisting of 21 chapters. Forgive my unbridled enthusiasm, but as one who not only writes about boating but reads everything he can get his hands and eyes on, I consider it the finest approach to mass education ever to come down any waterway. Sections include smallboat handling, safety tips, trailering, emergency procedures, navigation, weather, equipment requirements, boat operation and much more, as well as information on boating laws and regulations. The workbook also contains examinations with four separate answer cards so the crew can join in. (No cheating, gang. It's a self-evaluation

so that you not only discover *what* you know but, more importantly, *what you don't know!*) Simply mail your answer card to the PFC and they'll grade it. A certificate and ID card is awarded to each successful participant. Incidentally, this is the same workbook guide used as the basis for the Commission's three-lesson boating classes.

Since over 170,000 copies of "Pennsylvania Basic Boating" were mailed out this past summer, why bring it up now? For several reasons. To those of you who had one of the unfortunate summers I depicted, chances are you never read the Guide and this may stir you into digging it out again. It never hurts to use it from time to time as a refresher and even polished skippers admit finding info and tips they had never learned or had forgotten. Besides, where else can you get so much for so little? A postage stamp to mail in the answer card to the people who really care about you. Also, it could only be mailed to those who owned *registered* craft — those propelled by machinery. The Commission simply had no names and addresses on those with unregistered craft such as inflatables, canoes, rowboats, sailboats, etc. But these folks can get a free copy by writing BOATING, Box 1673, Harrisburg 17120. If you're really in a hurry and can catch up with one of those fast-moving, hard-working Waterways Patrolmen, he just *might* have an extra copy or two with him. Again, it's called "Pennsylvania Basic Boating".

By the way, be sure to carefully read the 17-point summary, "*What Makes a Good Skipper*," on the final page. While not necessarily original or novel, this clear presentation of a good skipper's qualifications deserves thorough appraisal. For when you not only understand all points but automatically apply them, you'll know you're a good skipper.

One final tip: head for the nearest stationary store and purchase an inexpensive plastic pouch to keep your Guide protected. Next season, put it aboard and keep it about. Great for instant reference or to take an "on-the-water" refresher course after you've filled the stringer with fish.



When exploring strange water, do so in the safety of a vest. This young lady had a good instructor! Like swimming, the "buddy system" in boating offers extra safety in numbers as well as more fun.



Beatitudes for Anglers

Blessed are the anglers who hold their hands close together when describing a fish: for they shall be believed.

Blessed are they who laugh not when their comrades lose a lunker: for they shall receive sympathy in turn.

Blessed are they who keep their tackle boxes in meticulous order; rods in repair; reels oiled; boats caulked and painted: for they shall not be forlorn on opening day.

Blessed are they who carefully remove the hook from a small fish and return it carefully to its element: for one day they shall rehook it as a lunker.

Blessed are they who practice their casting in a desert place: for they shall not be snaggers of men.

Blessed are the anglers who use barbless hooks and return many fishes to the brook: for they shall never weary of angling.

Blessed are the boat anglers who know how to swim: for they shall go on many fishing expeditions.

Blessed are they who carry no flask on either hip in order to balance their canoes: for they shall live to fish again.

Blessed are they who leave their camp and fishing sites so clean that when they are gone, no one suspects anyone has been there; and especially blessed are they who pick up the debris discarded by others: for they shall have the reverence of their children's children.

by Carsten Ahrens

*Blessed, too, is he who sayeth to himself: Hath my subscription expired?
Check thou thy mailing label; do the numbers "10-76" appear?
If so, thou hast had it!*

(To put it another way, send us three bucks, your name, address and zipcode. That will keep you in good standing for another year. Or, make it \$7.50 and you'll be on our rolls for three more years of reading.)

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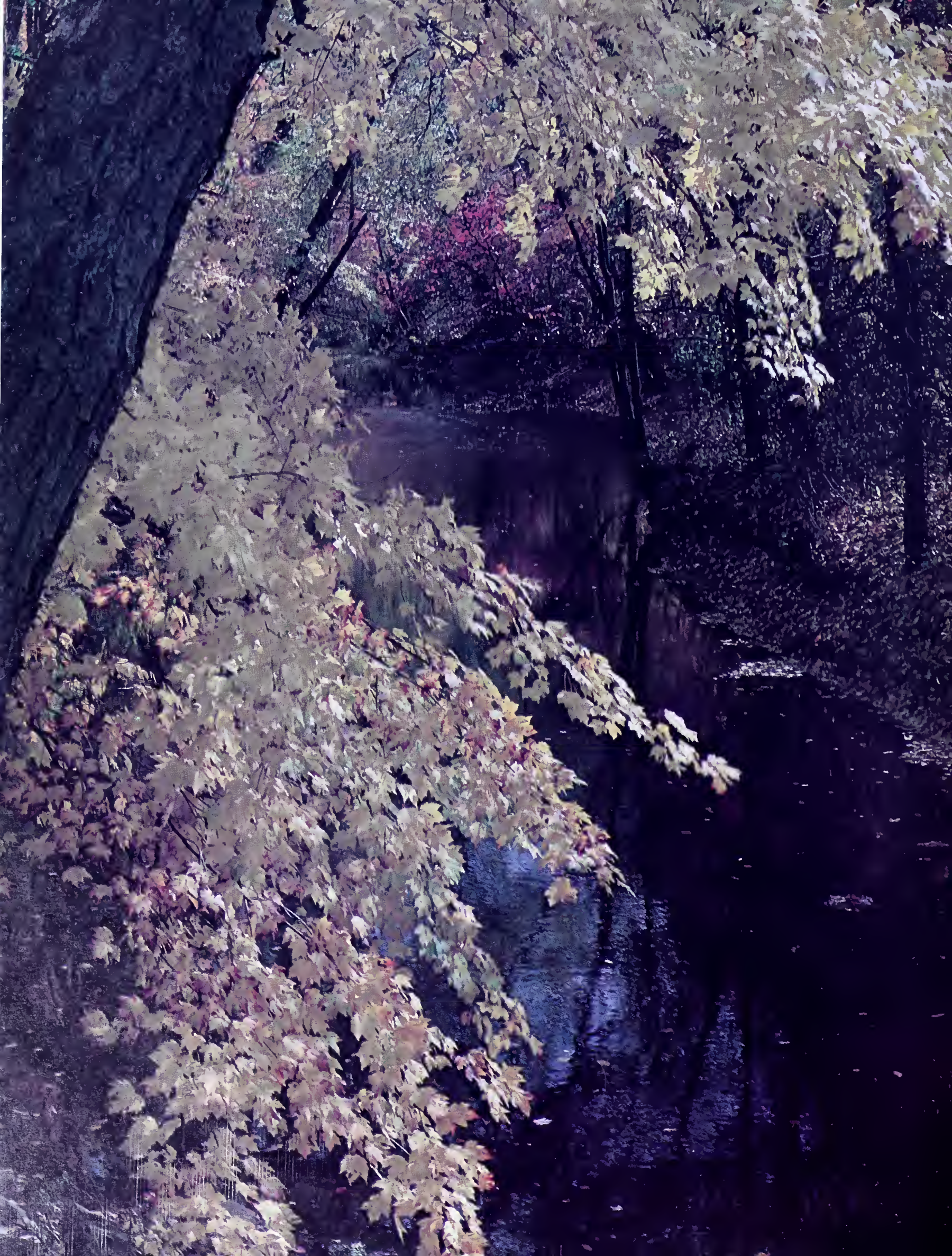
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OUR BEST HOPE—

Most restrictive laws have been promulgated because of abuses to people or other resources. So it was that the old Board of Fish Commissioners asked the General Assembly to enact Section 200 of the Fish Law, which says in part "No persons shall allow any substance of any kind or character deleterious, destructive or poisonous to fish and aquatic organisms, amphibians or reptiles to be turned into or allowed to run, flow, wash or be emptied into any waters within this Commonwealth."



While this has been our mainstay as the front line in our fight for clean water, the fact is that the Clean Streams Amendments of 1970 are much more detailed and carry with them a bigger fist. These amendments, of course, are enforced by the Department of Environmental Resources, and we are pleased to cooperate with the Department in those duties. The third party in our never-ending fight for clean water is the U.S. Environmental Protection Agency in their implementation of the Federal Water Pollution Control Act, and others. It sounds like a great team, and really is.

However, we are up against some terrible odds. While we have been beneficiaries of the recovery of much good water in recent years, new poisons are being invented everyday at an alarming rate. Some have been with us for some time and are only now becoming known by the public, and the long-range effects are being felt.

None of us in Pennsylvania thought much about Kepone or Mirex, as they are not household words, nor are their uses common in Pennsylvania. However, the poisoning of the James River in Virginia two years ago by Allied Chemical Company of Hopewell, Virginia, not only did a terrible amount of damage to James River fishermen, but effects have spread to the lower Chesapeake Bay. The Pennsylvania Fish Commission was shut off from its source of shad eggs for the Susquehanna River program by the closing of the James River to commercial fishing. Recently, we found the same company had contracted to a firm in State College, Pennsylvania, to manufacture Kepone and Mirex, and the effects of their discharges have been found in stream born trout and suckers in the famous Spring Creek. In early October officials of Allied Chemical Company and of the City of Hopewell pleaded guilty to almost 1,000 criminal charges, and the penalties have run to 13.2 million dollars. Penalties, however, do not undo the damage which could last for decades.

Another more prevalent chemical is in the form of polychlorinated biphenyls which are found in every household and which are particularly useful because of their property of not degrading in the environment. Lake Ontario has been closed to fishing because of the prevalence of PCB's, and the Hudson River has serious problems. Surveys in Pennsylvania have shown the chemical in existence in fish, but not in any quantities to cause alarm.

These are just a couple of examples of the problems caused by a greedy industry which has refused over the years to police its own ranks and to responsibly monitor the potential dangers of the thousands of chemicals they invent and produce, for quick gains each year.

The recently enacted Federal Toxic Substances Control Act is a great light at the end of the tunnel. Industry is now required to prove, at its own expense, that their products will not harm people or the environment, instead of having the burden of proof on the government.

Perhaps it is always true that something good comes out of every adversity, and if we are not too late in this new federal Act, it is our best hope.

Ralph W. Abele,
Executive Director

Pennsylvania Angler

Pennsylvania's Official Fishing & Boating Magazine

Published Monthly by the
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Volume 45 - No. 11

November, 1976

CONTENTS

Smoking Fish is Easy by Waterways Patrolman Harry Redline	8
Father, Son & Fighting Fish by Gordon W. Tomb	10
Evolution of a Fly Fisherman by Theodore E. Kiffer	12
Modulus Smodulus by G.A. Mayo	17
Pennsylvania's First Rearing Marsh by James Meade & Dan Bourke	20

Front Cover: November sends serious musky men to our lakes and rivers and Charles Fox, long noted as a rather devoted trout, is one "convert" who has been doing rather well with those muskellunge in the Pennsylvania Fish Commission's Opossum Lake, near Carlisle.

Back Cover: The Juniata River has been gaining fame for a number of years as a great musky producer. Some anglers feel that dawn is one of the best times of day to seek out one of these trophy fish.

Photographs by Jim Bashline

MONTHLY COLUMNS

FISHING OUTLOOK	2	STREAM NOTES	24
LEAKY BOOTS	4	FLY TYING	26
TAKING A CLOSER LOOK	6	ASHORE & AFLOAT	30
ANGLER'S NOTEBOOK	32		

James F. Yoder, Editor

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Wading cautiously to a midstream vantage point, this late season musky fisherman seeks out a trophy.

fishing outlook

by george e. dolnack, jr.

Accomplished fishermen know that they must adapt to nature's ways if they expect to continue being successful in their piscatorial endeavors. And November, which is known to dish out a smorgasbord of weather that ranges from days that are unseasonably warm to those that are bone-chilling and laced with snow or rain, can put the flexibility of any fisherman to the supreme test. Despite this gloomy picture, November is a month of some very good fishing.

While other outdoor activities take the spotlight this time of year,

the all-around sportsman works in some fishing during and between his other outdoor excursions. More than one fair weather angler has discovered that good weather doesn't always guarantee a full stringer. In fact, many have found out that the opposite is true, especially when it comes to end-of-the-year fishing.

Though ignored by a lot of late fall and winter anglers, musky fishing is vigorously pursued by a few all across the state this time of year. For this toothy predator, the usual offerings will do until the first cold snap drives the water temperature downward. Afterwards, according to some dedicated musky fishermen, different tactics are required to entice the musky into striking.

Their theory is that once the water's temperature starts to drop, the musky's gums start to swell, thus hindering its ability to chomp down on and hold the larger baits and lures. This condition, they claim, lasts until the water warms up again in the spring and the musky's mouth returns to normal.

To back up their thinking, these anglers say that more muskies are taken during cold weather on buck-

tail jigs, spinners, small minnow type lures and minnows than on big hardware and baits.

In addition, they point out that more bass are now caught in musky holes than when the weather was more temperate.

The reasoning behind this is that more bass are hanging around since the musky's preference is for smaller fish during this time of year. So the bass stay where they are until warmer weather activates the musky's desire for a gluttonous mouthful. And when this fish is on the move looking for a meal, his neighbors get the message and move out. This is why, it is theorized, that not many bass are caught in a musky haunt during the warmer months.

Of course, there are other thoughts on this and exceptions to the rule, but if you want to go along with what some of the expert musky fisherman say, then try smaller lures and bait to catch this fish in the cold days ahead.

(Editor's note: The theory advanced by the "experts" interviewed by the author represents their personal opinions. Like most all fishing lore, it is but theory and the Angler



It takes more than a wet, bone-chilling snowfall to make this pair of hearty musky fishermen go home.

assumes no responsibility for its supposed value.)

Jigs up to $\frac{5}{8}$ ounce are in heavy use; and, an all white lead-head is not only the favorite, but the one that seems to be the most productive. Bucktails with a white body and red or yellow head are also popular. When fishing jigs, vary your retrieve and watch out for the last few feet. Muskies sometimes have a habit of chasing the lure all the way to shore before nailing it just as it is pulled from the water.

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

Another fish that is high on the top of the list when it comes to table fare, but plays to an almost empty house during these days of wretched weather is the walleye. Those who do fish for the tasty walleye regularly have discovered that, at times, the more miserable the weather, the better the fishing.

One of the choice lures for walleyes is also the bucktail jig in all white or white with a red head. Minnows up to three inches long are the natural favorite of the livebait fisherman and the walleye. Most walleye anglers will agree that night time, when the fish feed close to shore, is the best time to fish for walleyes.

When you're seeking either of these fish, you can double up on your fun since some of the top waters in the state are inhabited by both species. And to make things easier for the angler, both fish can be taken on the same lure and baits.

Places to catch muskies and walleyes throughout Pennsylvania are many. Here are a few that are highly recommended.

One of the best musky and walleye spots in the northwest can be found in the Kinzua Dam tailrace. More Allegheny River action can be had all the way down to East Brady for these two fish. Anglers concentrate much of their activity at the mouths of tributaries like Tionesta Creek and the Clarion River. Downstream, the mouth of Bull Creek near the Fish Commission's

Tarentum Access Area and Chartier's Run below Lock #4 gets lots of musky attention.

The Juniata is also an alltime favorite. Fish Commission access areas at Lewistown, Mifflintown and Thompsontown make this river easy to reach and easy to fish.

On the Susquehanna, the North Branch from Sayre to Tunkhannock is good musky and walleye water. Getting to this stretch is also made easy by Fish Commission Access areas along the way. The run between Northumberland and Shickshinny turns up nice catches of both fish too. The lower Susquehanna, from Falmouth on down to the Conowingo pool also provides good walleye and musky fishing with very little pressure.

Muskies and walleyes can be found on the Delaware River from Wayne County down to Martin's Creek. At least eleven public boat ramps are located here and finding a place to fish is no problem.

And finally, for a bonus, all of these waters contain an abundant population of smallmouth bass that will also go for the same lures and baits previously mentioned.



"SHALLOW THINKERS," HE SAYS —

I am a thirteen year old boy who loves hunting and fishing to no end. I have nothing but praise for the Fish and Game Commissions. I feel anyone giving you a problem is a shallow thinker and an ingrate!

I, as an angler, am not too good for I catch few fish. Still though I love to fish because it makes me feel close to nature and God. It also cheers me up when I'm down. I also love boating for we have a boat and I feel the Angler and other information you have helps anyone learn greatly. I am now working on your course Pennsylvania Basic Boating. After college I would like to be a naturalist and I feel I should stand up for my rights as an angler and hunter.

The article in the September Angler by Mr. Abele, Our Heritage is in jeopardy is telling exactly what I mean. The part about the vice-president of a steel company is exactly what I hear with even cases about butterflies. I planned to do something about it ever since I could understand the issue even if others don't. I hope you will print this letter in your magazine so some grown-ups are embarrassed into doing something to save these rights, other than to complain, because some little kid did and is. Thank you for all you do.

Your Friend
BOB SNYDER
Elizabethtown

(Editor's Note: Because of the absolute sincerity in young Bob Snyder's letter we have printed it exactly as it was received. Thank you, Bob!)

HOW? WHERE?

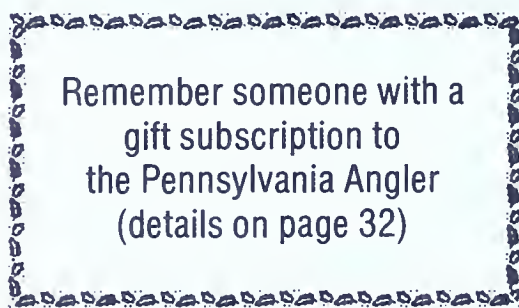
I know turtle fishing is not nearly as popular a sport as trout and bass fishing — I have never seen a word on the subject in the *Angler*. I feel many readers would like some advice on that sport: what type of bait, how to pick a good spot, what type of fishing rigs, also what season is best.

I live in Allegheny County very near Washington County. Could you tell me where to fish for turtles? I also would like to tell you how much the informa-

tion and ideas that you put in the *Angler* make fishing easier and more productive. Thank you and more fun in fishing.

RAYMOND C. ZETHNER
Heidelberg

Right you are, Raymond! Most of the word we hear from our readers on turtles concerns cooking them once they're caught. Sooo, knowing there must be more out there who feel as you do, we're going to "open the market" for a good story on turtle "fishing" in the hope that we can provide our readers with a few tips on how it's done, perhaps where, as well. To clarify that, we are willing to purchase a turtle catching story from one of our readers. Those wishing to submit a turtle catching story should submit it in typewritten form (double-spaced, please). It need not be long but it should be complete. Payment will be based on neatness, thoroughness of detail, and your ability to "tell a story" - with fishermen, that shouldn't be difficult! (Photographs of turtle-catching tackle and on-the-spot technique will add value to the article.) All entries must be postmarked not later than January 15, 1977. Ed.



MORE BROWN SPOTS!

After reading Hal Plusch's comment on "Catching Worms with Vinegar" in "Leaky Boots," I can offer him my sympathy. I also live in an apartment complex in Sinking Spring, Pa. I also poured vinegar on the grass . . . waited . . . but no worms. A day or so later — a large brown spot of dead grass! I was lucky. A lady tenant took some sod up to plant flowers. I dug up the dead grass, and put the sod in. As of this date, the grass is back to normal and green again. I never did see any worms, but I do think it would be a great weed killer.

CLAIR A. BANEY
Sinking Spring

WORMS ENJOYING VINEGAR?

More bad news on catching worms on vinegar. In reply to Hal Plusch's letter in the August issue, I agree with him a hundred percent. I have used a gallon of vinegar in a park trying to get worms to come up. They must enjoy drinking the vinegar because none ever come up.

And, as for the readers of the *Angler*, they are too lazy to write about it or too ashamed to tell you about it.

I enjoy reading your Leaky Boots, Ed, and look forward every month for it. Keep up the good work.

MICHAEL SUSKO
Philadelphia

P.S. If you haven't tried getting worms with vinegar, Ed, give it a try and let me know how you made out.

It seems to me that the author of the original "Catching Worms With Vinegar" article, Loring D. Wilson, specified that it be from old wine which had not been consumed on schedule and went sour. Could it be that the difference is in "store bought" vinegar you might (that's just a supposition) be using? Another possibility is that after breathing the fumes of his wine vinegar writer Wilson only thought he saw worms, but we really can't say! Ed.

"BY GOLLY . . ."

This is in response to an article in your August issue, "Let 'em eat Pork." Well, I tried L. D. Wilson's method of a Johnson silver weedless spoon with a pork rind frog dangling on the end and *by golly it worked*. I am 15 years old and love to fish for pickerel (my favorite fish). So, one morning Gary Ell (my friend) and I went fishing and by the end of the day we had caught and released some dandy pickerel. My thanks to Loring D. Wilson, the author of "Let 'em eat Pork," and to the *Angler*. Keep up the good work!

ERIC GARNER
Allentown

Great, Eric! That's one for Wilson . . . but stay away from his vinegar! (Side note to Loring D. — you win some, you lose some!) Ed.

VOTE OF CONFIDENCE

I am a Pennsylvania angler, and really enjoy your magazine. I am looking forward to an exciting salmon season. I went to Lake Erie last October for the first time and thanks to your magazine I knew where to go and how to fish. This year I am even more informed, therefore confident. Maybe I will even catch a coho this time. My vote of confidence for "FLY TYING" article is "Yes!!"

I'm trying to say that your magazine is great because sometimes we Pennsylvania anglers need a little help.

ROD CROSS
Monongahela



LAKE TROUT are few and far between and one longer than a yardstick is really a trophy. Hank Rosen, left, caught that 37" 24-pounder in Crystal Lake.

TRAVELIN' BROWN!

On Sunday, May 16, 1976, the Marysville Sportsmen Association tagged and released some rather large brook, brown, rainbow and palomino trout which were worth up to \$25.00 per fish. One of these, a 17-inch brown, bearing tag PFC 3832, was released in Fishing Creek, Perry County, approximately two miles upstream from the mouth of the creek. This trout was caught by Mr. Elsworth Parson almost two months later on July 12, 1976, about three miles upstream from the mouth of the Little Juniata Creek near Duncannon. In order to reach the Little Juniata, this brown had to travel seven miles upriver to the mouth of the Little Juniata, then upstream to the point where it was caught, for a total of twelve miles!

MEL FORTENBAUGH
Marysville Sportsmen Assn.

ONE FOR SERVAIS

May I compliment you on a truly fine magazine? I am not a long time subscriber, but you can bet your favorite fly I will be!

Have just finished reading the September issue, couldn't put it down, and must say it was tops. I would like to give a pat on the back to Larry Servais for a

very funny but true-to-life story. I am sure many of your readers have seen deer hunters also come to camp with half a sporting goods store.

Thanks again to all of you! And you may be sure my friends will be urged to send in a subscription.

JESSE F. HORN, JR.
Clifton, N.J.

Urge 'em, Jesse, urge 'em! Ed.

OH OH! WATCH OUT!

I think the man's problem on not catching big trout on flies in your September "*Leaky Boots*" is if the trout were stocked recently, they are lazy and sluggish. They're too used to the food being brought right to them, which doesn't require much energy, so they lay sluggish on the bottom of the stream waiting for small fish and crawfish which are mostly their diet. If they do take flies, especially small flies and midges, they are usually a side dish or dessert which they aren't concerned in more than halfheartedly anyway. Of all the flies for big trout, streamer flies and similar patterns are good, for both stocked and native trout.

BILL MONTORO
Spartansburg

Bill, good buddy, your theory "aint necessarily so." I just returned from a trip to our Pleasant Gap hatchery and had an opportunity to witness quite the opposite of your assertion that hatchery trout are "lazy and sluggish." Waiting for a friend, I wandered to the edge of a raceway to see our finny friends. At my feet were a few tiny pellets which must have spilled during a feeding. Tossing them into the raceway, one at a time, brought forth such an explosive reaction — it was violent competition for those single pellets — that I can't buy your theory. True, in perhaps some isolated cases freshly stocked trout might take a little while to adapt and adjust to their new homes, but our friend, Gary Davis, was talking about a three-year experience and similar experiences of his friends. Any more answers out there? Ed.

HERE'S WHAT . . .

Here's what I think of the *Pennsylvania Angler*. Please enter my gift subscription to my brother in Nevada. Of all the popular fishing magazines I read, I must say the *Angler* has to be at the top. It's interesting and informative. Keep it just the way it is. After all, isn't boating and fishing like love and marriage.

Thanks for the good fishing in beautiful Pennsylvania.

MICHAEL FOMOUS
Scranton

About that good fishing, Michael: our boys try . . . Heaven knows they try! Boating and fishing are like love and marriage? We wouldn't touch that analogy with a ten-foot pole! Ed.

LOSE SOMETHING?

On July 31, while fishing, I found a woman's cigarette case with some valuables in it along the beach at the Walnut Creek Access Area, Lake Erie. Did anyone among your readers lose this or do they possibly know someone who did? As there was construction in progress, there was nowhere to post an ad. The owner may have it back by identifying the case and its contents.

Thank you for your help in finding the owner.

JIM PARADA
317 E. Meyer Ave.,
New Castle 16105

Thanks to you, too, Jim, for your concern. Ed.

MORE "*Leaky Boots*"

please turn to page 28.

Jimmy Novak, Coopersburg, checks small chub which he caught while fishing in Saucon Creek.



Taking A Closer Look

by Tom Fegely

THE MIDSIZE MINNOWS

The word "minnow" immediately brings to mind a small, shiny-scaled fish of some sort. Although most members of the minnow family, scientifically known as the *Cyprinidae*, are indeed small, some may grow to 50 pounds or more. The carp is classified as a minnow due to physical features which are shared with the tiniest of dace and shiners. These include: a similar body shape, large body scales but no head scales, teeth in the throat but not in the mouth, a single dorsal fin (usually short), and a deeply forked tail. Besides the carp, there are two midsize minnows that are familiar to all Pennsylvania anglers.

The second largest *Cyprinid* in the state is the FALLFISH. The fallfish, scientifically named *Semotilus corporalis*, is well known because of its habit of hitting wet and dry flies,

streamers, spinners, and most types of live bait used for trout and small-mouth bass. Once hooked, a fallfish gives a good battle for a short time. But after one or two spirited rushes, the fish tires and can be brought in effortlessly. Because it inhabits clearwater streams and rivers with good trout or bass structure, it's not unusual to catch a fallfish every time out.

Not many anglers keep the fallfish they catch for they have never gained a reputation as a good table fish. Those who have tried it, however, describe its taste as "sweet and flavorful" — despite the many fine bones. If not cleaned and iced soon after catching, the fallfish is said to become soft and unfit for the table.

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(details on page 32)

Several years ago I spoke to three youthful float trippers who had set up camp along Pine Creek in the Grand Canyon of Pennsylvania. The teenagers had just finished off three large fallfish which were pan-fried and garnished in butter. Each agreed that they were "delicious." Thoreau would have disagreed with the boys, however, for he described the fallfish as ". . . a soft fish that tastes like brown paper, salted."

The name fallfish is derived from this creature's frequency in pools at the foot of waterfalls although this is only one small portion of its total habitat. Early Dutch settlers in New York called the fallfish "corporaalen" or "corporal," a word which now makes up part of its Latin species name. In Canada the fallfish is a "chub" and it is known regionally as "roach," "silver chub," and "windfish."

A springtime spawner, the fallfish is noted for its unusual nest-building capability. The male first excavates a nest in shallow riffles or rapids over gravel bottoms, then entices a female to lay her eggs in the depression. After fertilizing the eggs, the male covers them with

large stones, some up to two inches in diameter. These it gathers from surrounding spots and carries back to the nest in its mouth. By the time it is finished, the nest spot looks like a large mound of stones rather than a depression in the stream.

The CREEK CHUB (*Semotilus atromaculatus*) is a smaller cousin of the fallfish with which it shares nest-building talents. Known to every young Izaak Walton in the state, it grows to 12 inches in length but six to eight inches is more typical. The creek chub is essentially a small, clearwater stream resident and is found practically everywhere that this habitat exists.

The chub is as avid and eager a nest-builder as the fallfish. Though the chub may dig more pits and use smaller stones, the completed mounds are sometimes larger than those constructed by the fallfish.

A female usually deposits only three dozen or so eggs in each pit. The male quickly fertilizes them, covers them up, and patiently waits while his mate continues to spawn. Subsequent nests are also covered and the area soon looks like a small colony of stone mounds. The male stands sentry amid the nests until incubation is complete.

The creek chub is readily identified by a black mark at the base of the first three rays of the dorsal fin. In coloration it much resembles the fallfish except for a purplish sheen along the flanks. Spawning males are equipped with six to eight hard tubercles on the head and snout during the spring mating period.

Creek chubs are largely carnivorous and are known to hit wet flies as well as hooks garnished with worms or corn. One U.S. Fish and Wildlife Service survey, in which the stomach contents of specimens were analyzed, showed that their diet consisted of 51 percent insects and 26 percent surface drift. The rest included crustaceans, mollusks, algae, and plant seeds.

Though most serious bass and trout anglers may curse the fallfish and the creek chub (except when using the hardy chub as musky bait), these two "midsize minnows" have provided many hours of angling fun for youngsters and oldsters alike.



The fallfish, above, is Pennsylvania's second largest minnow. A new state record catch: a 19³/₄-incher, was caught in 1976. Although few anglers prize it as table fare, its flesh is flavorful although somewhat bony.

The creek chub, below, is sometimes called the "horned dace" due to the horny protuberances the males get on their heads at spawning time. Sometimes a pest in a trout stream, they provide fishing fun for youngsters.



Convert your catch to taste-tempting tidbits . . .

Smoking Fish is Easy!

by Harry Redline
Waterways Patrolman
S/Lancaster County

“Smoked fish,” the very thought starts the salivary glands to working! Trouble is, this delicious natural food product isn't always available everywhere, and when it is, it's expensive.

Any angler in Pennsylvania who wants to can readily enjoy smoked fish that they have caught. It really isn't as complicated as it sounds, and it can be as inexpensive as you wish to make it.

First, catch your fish! That is the second most enjoyable part. The fish can be anything found in fresh water, but the best species are catfish, eels, trout and salmon. Other species such as walleyes, bass, panfish, etc., are smokable, and quite delicious but the more natural oil in the fish, the better it smokes.

Clean your fish as soon after catching them as possible, and keep them cold! Actually, the better care you take of your catch, the better it will be on the table, whether smoked, fried, pickled or whatever.

I heartily recommend an ice chest, filled with crushed ice, be taken along any time you wish to keep some fish for eating. Whatever is caught, and meant to be eaten, should be killed and placed in the ice, but not in the water at the bottom. Open the drain on the chest, or place a rack inside to keep your catch out of the water. Clean the fish as soon as possible, removing gills, viscera and membranes inside the body cavity, including that dark bloody mass (kidney) next to the vertebra.

Next, place the fish which have been thoroughly cleaned and washed in cold salt water, into the freezer. Freezing breaks down cellular walls, and allows the brine to penetrate more easily. If they are to be frozen for any length of time, be sure to double wrap, and force out any air trapped in the wrapping process.

Now you can build your smoker. The actual smoke chamber can be anything that will hold smoke inside,

a 55-gallon drum fitted with a rack, an old refrigerator, etc. You can build one of wood, or sheet metal, or buy one of the commercial smokers.

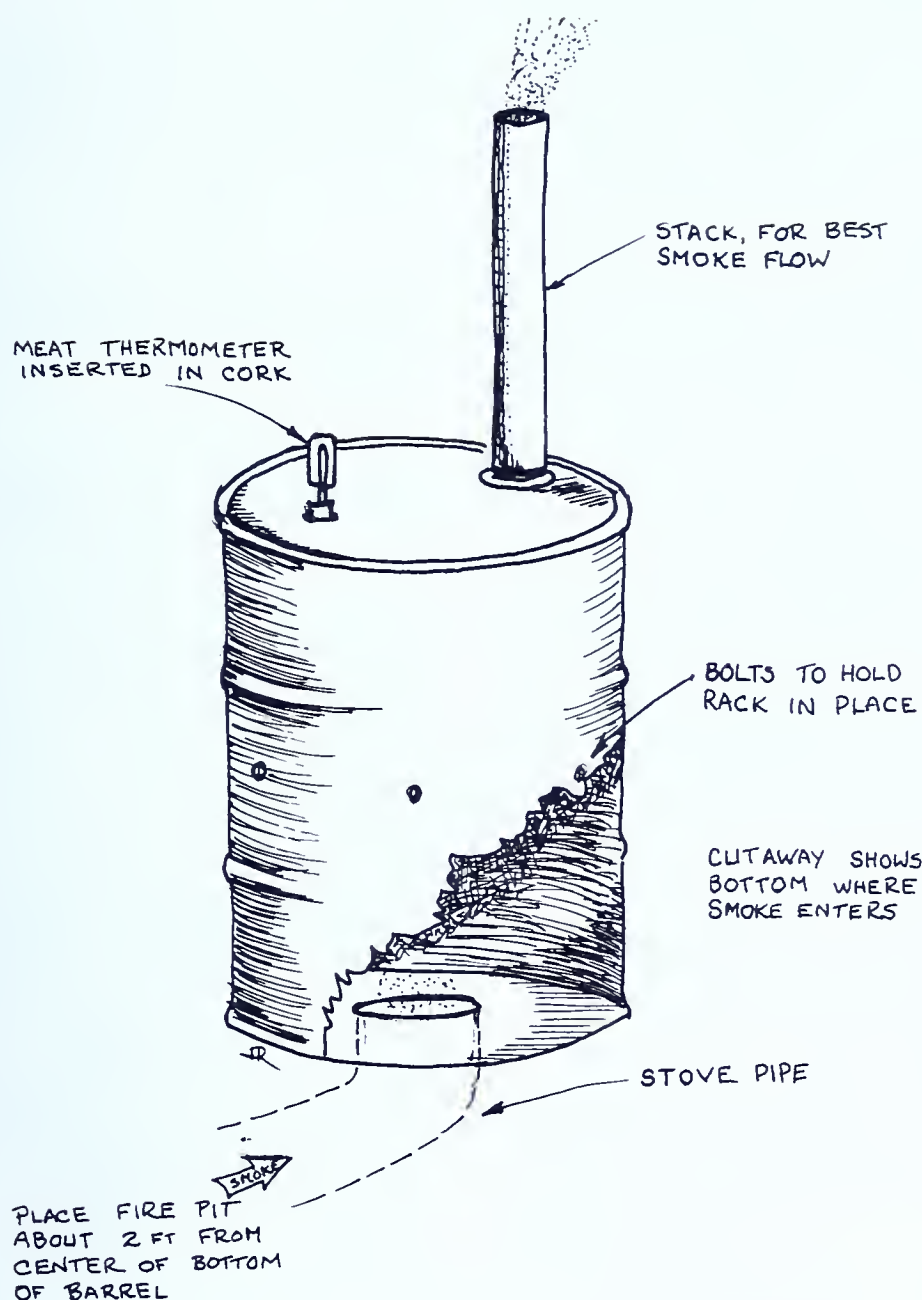
I use a 55-gallon drum with a removable lid. The drum was marked around the middle and 5 bolts inserted so that they support a rack. (see illustration) Next I cut a 6-inch hole in the center of the bottom. The top of my barrel has two threaded bung holes, one about 2 inches in diameter, the other about 1 inch. Into the large one, I inserted a 3 foot long piece of pipe to form a stack, and into the small one, I inserted a cork with a hole in it. I bought a cheap meat thermometer and put it into the hole in the cork.

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An important part of smoking fish is to smoke them, not cook them. Keep the temperature under 100°F for the smokiest flavor, and a firm finished product. Raise it to about 180° for the last hour or so only.

Okay, you've got your smoke chamber put together. Now you build the fire box. Mine is a pit dug in the ground. The smoke chamber is connected to the fire box by a 2-foot piece of stove pipe that slopes up to the smoke chamber. This can be accomplished by setting the smoke chamber on a mound of earth. (see illustration)

Now that the smoker is set up, you will want to get started. Take the fish out of the freezer and let them thaw while you mix the brine. There are a number of commercially prepared brines on the market, just remember when using them to mix enough dry ingredients into the water that an egg will float, with an area about the size of a nickel exposed above the solution. My favorite brine recipe is 4 cups *canning*, not iodized, salt and 2 cups of dark brown sugar to a gallon of warm



water. Pepper, onion, bay, etc., may be added according to your taste. I usually add 1 tablespoon of black pepper and a medium onion, chopped, to the brine.

Use enough brine to liberally cover the fish. If the egg doesn't float when you test it, add more salt and sugar, proportionally, until it does. Mix your brine thoroughly until the salt, etc., is in solution. Do not use iron kettles or spoons, the salt will attract them, and make the finished product inedible. I use a crock and a wooden spoon. When the brine is thoroughly mixed, add the partially thawed fish and keep in a cool place until the fish are thoroughly brined. I find 12 to 16 hours about right for average sized bullheads, trout, etc.

If you have large fish, over 15 inches, I recommend splitting them lengthwise for both brining and

smoking. Catfish should be skinned, as well as eels. The skin should be left on trout, salmon, and other species. Remember that the brine and smoke will penetrate better, and the excessive oil drains out better if the pieces or whole fish are less than 1½ inches thick. Catfish are excessively oily, but if properly prepared, make one of the best smoked fish products.

Weight the fish down, so that they are totally immersed in the brine, and stir them every few hours.

When the fish have been in the brine 12 hours for 8- to 15-inch fish and 16 hours for larger, take them out and rinse lightly with cold running water. Take them outside and allow them to dry off, in the shade. When dry to the touch they are ready for the smoker.

While the fish are drying, you can

get your fire going. I usually start the fire above the pit, and when it is burning well, I rake or shovel it into the fire box. Commercial charcoal briquettes will burn evenly and well, but try to get those which are made from oak or other hardwood.

Good woods for smoking are not hard to find. Apple, Hickory and Maple work best for me, and are not hard to obtain. Any fruit wood is good, and Wild Cherry is hard to beat. If you get stuck for wood, simply use charcoal. Be careful however to not allow too much bark or any moss, leaves or grasses to be introduced into the fire box. Grass, leaves, moss, etc., will make a bitter smoke that will taint the finished product. So will some woods, so stick with fruit woods, Oak or Hickory for best results.

By now, the fish should be dry to the touch, the fire a nice bed of coals, and you are ready to put the fish into the smoker. You can lay them in, skin side down on racks, or hang them from hooks. If you use hooks, keep the temperature very low or the flesh will soften and the fish will fall. A dense smoke should be built up for the first couple of hours, by placing a layer of fuel over the coals, and cutting off the draft.

Remember to keep the temperature down for the first few hours — dense cool smoke will penetrate and flavor much better than high temperatures and low smoke.

After about 8 hours, the fish should begin to change color and firm up. Thoroughly smoke-cooked fish will appear almost black. You can check your progress by occasionally sampling the product, but remember that smoked fish tastes best cold. When they are done to your satisfaction, take them out, invite some fishing buddies over, and have at 'em.

Smoking fish or other meat products is a method of preserving. If done properly, foods can be kept indefinitely if kept dry. For my own purposes, I wrap the fish and keep them in the refrigerator. Proper smoking means low temperatures in the smoker, drying between brine and smoker, and a good thorough brine bath. Keep these things in mind, and you will enjoy a superior food for very little investment.

Father . . . Son & Fighting Fish

by Gordon W. Tomb

“Any luck Mr. Tomb?” “One just rose to my fly,” I answered quietly. I was barely aware of the 10-year-old boy’s question and my answer for my heart was pounding from the sight of the trout. And I was hoping the cahill on this deep, slow stretch of stream was the combination that finally was going to set my rod quivering after two hours of studying what seemed by now to be a lifeless creek.

But my excitement ended abruptly as my friend’s son, recently acquired hip boots and all, tramped in beside me and began tossing his heavily weighted worm over my line.

Now both the boy and I probably would have been better off if I would have pointed out the error of his ways right then and there. But I generally prefer to let a child’s parent handle the discipline, keeping it in the family as it were. So, I merely clenched my teeth (In fact, I think I forced a grin!) and returned to my own son and the father of the errant child.

Before anybody gets the idea that I have the patience of Job, I must confess that I might have blown jugular veins had it been my son violating my territorial rights.

I’m quite sure I made a mistake by not explaining to my eager little friend why he shouldn’t crowd a fishing partner. After all, somebody is going to have to tell him sometime.

But I think I would have committed a worse transgression by overreacting if my son had been the cause of the problem. Angling with one’s child has a way of sometimes



bringing out the worst in us. Let me state for the record that I dearly love my eight-year-old son, Matt. Nevertheless, there are times. . . .

Any fisherman knows that patience is an essential ingredient in pursuing his sport. Add a youngster who has more kinetic energy than a bass trying to take lure and line into submerged brush and the need for forbearance increases geometrically.

For instance, have you ever noticed that the shrill announcement of "Hey Dad, I have a bite" is followed more often than not by the discovery of the exact location of a bottom-dwelling rock.

I admit that I too have caught my share of rocks, tree limbs (underwater and terrestrial) and other objects that have no place in a creel. But, such misfortune is even more frustrating when you have to reel in after making "the perfect cast" so you can rescue a young angler on the verge of breaking his rod in a losing battle.

The trials and tribulations of parent and child following the piscatorial pursuit are many and, I suspect, universal within the ranks of my fellow dads. Therefore, I won't catalogue these woes. I will instead jot down some thoughts on how fishing excursions might be made more pleasant for all concerned.

Parental attitude probably is the single most important factor in this business of keeping fun in a day of fishing. I'm not going to take the stand of a permissive child psychologist. Discipline certainly has its place at streamside just as it does at home.

Nonetheless, the father who takes his young child fishing and at the same time plans to methodically and quietly stalk the big one is only kidding himself.

Dad had better decide at the outset that his primary benefit of the day will be companionship with son or daughter; that his principle role will be that of teacher; and, that he either will handle more sunfish than he thought possible, or will become all too intimately acquainted with the nature of the lake bottom.

Of course as junior grows older and more skilled, Dad's own fishing time will increase. It is simple truth

that our days of solitary and uninterrupted fishing are bound by natural law to be longer than the days of our child's youth. The fact seems to prove the importance of making the most of the present.

So when father finds himself regarding his child's dependency as a nuisance it will serve the elder well to look ahead to the time when he might welcome the occasional company and humor provided by a novice fisherman.

There are of course more obvious ways of keeping father and son happy. A lot of grief can be avoided by making some good choices in selecting tackle and methods.

Closed face reels will practically eliminate those infamous rat nests which come with open face reels. Relatively inexpensive spin casting outfits are quite adequate for children. Intricate weaves of monofilament will neither catch fish for junior nor do Pop's failing eyes any good.

Bobbers are handy gadgets for keeping hook and bait away from underwater obstructions. However, I usually fit my son's line with small split shot because I more often find success on the bottom than I do near the top. Whatever you do though, stay away from the heavier types of sinkers as much as possible. The big weights are inclined to become anchors.

Relatively heavy lines will cut down on the number of times new hooks have to be tied on to replace the one imbedded in an inanimate object. Although bluegills and small bass are the standard quarry for my son, his reel is wound with 8- or 10-pound-test line. I know it isn't very sporting, but I've elected to let him experience the pleasure of playing a fish after he has picked up some of the more basic skills.

Although small hooks are the only practical tools for dealing with such tight lipped creatures as bluegills and perch, the child will be able to grasp and remove hooks more easily if somewhat oversized hooks can be used.

Live bait will give the youngster the opportunity to catch virtually any species of fish that's interested in eating. Worms and small minnows are most often the key to keeping panfish and children busy with one

another. And, happiness is a busy child.

Where you fish of course depends on a great many things, including species being sought and driving distances. As for myself, I prefer to take Matt to a nearby lake where there is plenty of casting room rather than to our area's narrow, brushy streams. In other words, don't cramp junior's style with bushes and overhanging branches.

One day last June my son and I engaged in a "cooperative" effort that paid off with a 15-inch largemouth (a respectable enough fish for our Pennsylvania waters) for the understudy of the team.

Matt was equipped according to my formula for kids, a small minnow suspended about 18 inches below a bobber. Although bass of considerable size could be seen regularly cruising near the shore, my plastic worm had reaped only a small fish, which was returned to the water.

However, after 20 minutes or so, Matt's red and white bobber shot for the bottom and I began coaching: "Let him take up the slack . . . now, set the hook."

Matt was cranking furiously and the drag was slipping with just as much vigor. We had neglected to check the mechanism and tighten it properly. By now my rod was on the ground at a safe distance from our shuffling feet. I reached around the struggling boy to correct the problem. With that done, Matt began to gain quickly on the fish.

But the closer the fish got to shore, the closer it came to stumps which were clearly visible six feet out and four feet down. The zigzagging bass was determined to duck under some of the roots and was dangerously close to succeeding.

I mustered all the finesse I could and jumped in the water, hip boots and all. Grabbing the line, I jerked the fish away from the obstructions and hollered to Matt to run a few yards down the shoreline.

Well, we both acted as though that bass was the lake record. Matt had reason to be a little giddy. It was the biggest fish he had ever caught: "Boy, is Mom going to be surprised!"

Me? I was just exceedingly pleased.

Evolution of a Fly Fisherman

by Theodore E. Kiffer

Fishing for trout with the artificial dry fly has long been recognized as one of the most satisfying, relaxing, and rewarding pastimes that a human being can engage in. For fishing for trout with the dry fly is something more than just an attempt to catch fish, it is part of a total human experience, an experience that often has a profound effect upon the individual involved. One can read the classics on the aspects of the sport, one outstanding example being, of course, Izaak Walton and Charles Cotton's *Compleat Angler* with its appropriate subtitle of "A Contemplative Man's Recreation," which records the development of the angler.

Today it is relatively easy for one to become initiated into the mysteries of fishing for trout with the artificial fly. Colleges and universities offer courses in the sport; local chapters of Trout Unlimited or sportsmen's clubs offer classes on fly tying and fishing with the flies through adult education or extension sessions in local high schools. Expert advice and counsel is easily obtained, and in a very short period of time a person who has never held a fly rod in his hand before can be catching trout consistently using flies that he has actually tied himself.

Excellent equipment is readily available. Major manufacturers offer balanced equipment with line weights that are carefully matched to the flexibility and strength of a rod. Featherlight glass and graphite rods are within the price range of almost anyone desiring to fish. Then, too, the Pennsylvania Fish Commission has provided many miles of prime water designated as FLY-FISHING-ONLY water. Such areas are generally well stocked with fish, some of considerable size. All this means that today it is relatively easy to become a fly fisherman and to

reap all the accompanying personal satisfactions that come with it.

But it was not always so. In my own case the evolution from worm drowner to consistently successful fly fisherman was a long, arduous and, at times, almost impossible process. I have been an avid fisherman since I was six years old, spending every possible moment when I was with my grandparents on their farm in Forest County fishing for native brook trout in the little streams that abound in that area. Like the boy on the calendar picture, I really did catch fish with a limber rod cut from a convenient bush and a piece of braided line with snelled hook tied to the end of it. By the time I was 13 or 14 I had a cheap telescoping steel rod with red glass eyelets, and I was proud of those glass eyelets. With this rod I caught a few more fish. Then I began to notice that while fishing in the beaver dams and in the larger pools of these very small streams I would occasionally see a trout breaking the surface. I had read enough in outdoor magazines to realize that these trout were taking flies from the surface of the water, and I decided to become a fly fisherman.

So it was that one day in late May shortly before school was to close and we were to be set free for the summer that I found myself in the five-and-ten cent store in my hometown of Oil City, nose pressed against the glass showcase that contained the fishing equipment. I should have gone to one of the local sporting goods stores and asked for some advice, but I didn't. I have since observed that many people who become successful fly fishermen are not the type to seek advice, and as a somewhat embryonic fly fisherman I was not so inclined either.

But then there was another, more

important, reason: I had but twenty cents to spend! In those days near the end of the 'thirties, many of us had little money to throw away on flies when we could dig an abundant supply of worms with little exertion. I finally selected the two gaudiest flies in the showcase, paid ten cents apiece for them, and carried these treasures to my bedroom where from time to time I contemplated their structure and dreamed of the trout I would take with them. I had really made a fortunate choice, for I have observed many times since that that gaudiest of fish, the native brook trout, will often succumb to the temptation of the gaudiest of flies and will readily take flies that would send an educated brown scurrying to his hideout in self-defense!

A couple of weeks later, school had ended and I was at the old farm for the summer. My cousin and I rose before dawn one morning (I now know of course that evening is the best time), and hiked some two or three miles up into the forest to a very large beaver dam built on the ruins of an ancient sawmill dam. As the flies were tied on six-inch snells we each tied a snell to the end of our braided line. Not knowing quite how to proceed or what to expect, we crept up to the beaver pond using the high mass of sticks and mud as a shield, and whipping our telescoping rods back and forth, almost simultaneously tossed our flies out onto the mirror-like surface of the beaver pond. And miracle of miracles, both flies disappeared in the swirling take of native brook trout. We each responded by jerking our rods perhaps a little too vigorously and when we reeled in our empty lines we discovered that we had been the victims of some sort of fraud that I have not yet figured out to this day. Those cheap flies were tied or glued directly onto the snell, there was no eye in the hook; and when the fish struck and we struck, we pulled the snell out of the body of the fly! And

Opposite page: the author in action on Spring Creek. Although he releases 75% of his catch, a few do end up in the frying pan. Photographs by J. Selby Kiffer



there we were, heartbroken, no more flies, our frustration not lessened by the sight of a seven-inch brookie jumping and jumping, trying to shake the fly from his jaw.

We tied on some hooks, kicked old stumps apart until we found a few worms, and continued to fish. We caught a few trout (it was almost impossible not to), but the magic had gone out of the morning, and of course we had none of the lightning-like responses to our offerings that had accompanied our clumsy presentation of those flies. How appropriate it would have been for a Ray Bergman or some other descendant of Walton to come along at that time and give me the advice (and the few flies) that would have confirmed and brought to full fruition the desire to be a fly fisherman that had sprung up within my being. But at least fifteen years were to pass before I bought another fly; and in that period of time war had come, fishing had been laid aside, and then the demands of college had taken away all but just a few fishing trips. So I had concentrated on plugging for bass and pike in nearby lakes. And then I met a true discipline of Izaak Walton.

Carl Krantz — the proud possessor of several very fine handbuilt, split-cane rods, single-action reels, double-tapered lines, and many fly books whose pages were covered with an indescribable variety of wet flies — was past eighty years old when we met. He rarely used dry flies, but he convinced me by demonstration that trout can be taken consistently with artificial flies. Opening day in 1954 found us on the Brokenstraw. The weather was cold, the stream was fairly low, and not many fish were being taken. I was using worms and salmon eggs and did not have a single bite. Being quite cold as well as frustrated from lack of action, I decided to walk back to the car where we had a thermos of coffee and some sandwiches. For perhaps two hundred yards above the bridge where we had parked the stream was fairly shallow, quite swift, and bordered on both sides by high, brushed-covered banks. I had noticed a couple of other fishermen wading through this stretch of water

to get back to the bridge so they could more easily exit the stream, so I did the same thing. I waded down through the middle of this unlikely looking water, climbed up out of the stream at the bridge wing, and made my way to the car. After getting the sandwiches and a cup of coffee from the car, I walked back to the bridge and leaned on the bridge railing and looked up stream. There I saw old Carl, his rod bent almost double as he fought a fairly heavy trout. He finally brought the fish to net, released it, and came on his way. As he approached the stretch of water just described, he did not put his rod away and splash through it the way several other people and I had done. Instead, he worked his large white streamer fly from side to side of the swift water — flicking it near the bushes, working it back across to the other side, and then reversing the procedure. I almost fell off the bridge when I saw his rod arch against the pull of a good trout. It took him some time to land the trout in that swift water but he finally did, released him, and came on his way. I watched him repeat that performance two more times. In other words, he took three nice trout from an unlikely looking stretch of water that had been fished by several and then had been disturbed by others wading through it. That demonstration should have convinced me.

On another occasion, perhaps a month later, we were again fishing the Brokenstraw, and Carl was using one of his favorite setups — a large streamer fly on the point of the leader with a small wet fly generally of a light brownish or white color attached to a six-inch dropper some eighteen inches above the streamer. He told me once he thought it worked so well because trout would see the streamer thinking it was a minnow chasing a smaller minnow or insect through the water and would become interested enough in the chase to strike either the streamer or the fly on the dropper. At any rate, as I came round a bend, there he was again, his rod bent double, the line jumping and slashing about through the water. I approached him and said, "I see you've got another one on." He looked at me . . . grinned, and said,

"No, it's a double header!" Sure enough, he had a trout on the dropper as well as on the point fly. After he had finally brought these fish to shore he told me that doubles happened not rarely but quite often.

Needing no more convincing, I hurriedly borrowed some leader material from him, borrowed one of his streamers and spent the rest of the day trying to learn how to work that streamer. I did raise one substantial fish, in fact I pricked him enough to feel his weight, but that was all. About a week later I caught my first trout on an artificial fly, a wet fly, that Carl called the Jeff Special. It was a kind of dirty white, winged fly that he said was tied by a friend of his named Jeffrey who lived somewhere in the eastern part of the state. Before we went home that day I had caught six trout on the Jeff Special and was apparently really hooked. But as summer wore on, I turned my attention to fishing for bass and the "blue pike" in Lake Erie and did not spend much more time trout fishing.

The next spring found me back at my usual practice — drowning worms in riffles, floating salmon eggs along the current, and occasionally catching a trout. On rare occasions, I caught many; but inconsistency marked my efforts, and when the immediate benefits of the stocking had all been harvested I found myself unable to catch fish.

Perhaps if I had tried harder, I could have learned to fish wet flies, difficult as that is, for I am convinced that a fisherman who will take the time and expend the effort to really become the proficient wet fly fisherman will consistently catch more fish than are caught by any other method. I realize that minnow fishermen will catch larger fish and that there are times when bait will really produce. There are those times when natural bugs, the real trout bugs, are the only effective lure, but year in and year out the wet fly will produce well. I think one reason for Carl's success was that, as mentioned before, he was in his eighties and was afflicted with the palsy that often accompanies old age. His hands were never still, but were always in motion, shaken by the tremors of old age. I believe that

this constant shaking was transmitted through his delicate rods to the flies giving them a lifelike quality that I could not transmit to them with my intermittent jerking through the water.

At about this time I moved from the area where Carl lived and never saw him again, but I remembered his success with artificials. But something was lacking in his method despite his unqualified, oft-demonstrated success: catching trout on flies under the surface did not have that electric quality that I experienced at the beaver dam so many years earlier. Armed with information gleaned from my reading, I purchased several dozen of the right kinds of trout flies — the dark and light Cahill, the Adams, the Hendricksons, the Coachman — and began to fish these dry rather seriously. I had no one to teach me, so I read Ray Bergman and practiced. And that practice paid off, for there have been those times when I have taken many, many trout while my bait fishing companions have not taken a fish. There have been other rewards as well.

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

First of all, fishing the dry fly is a marvelous form of recreational activity. One does not stand motionless, but is constantly moving, whipping the fly through the air, creeping slowly from likely looking spot to likely looking spot, trying to flick the fly under some overhanging branches, getting it to float at just the right place in a ripple, throwing a left or right curve to keep the line hidden from the trout. There is a great deal of satisfaction in simply making a series of good casts and presenting the fly in the right spot. The concentration involved makes one forget everything else, and that is really what recreation is all about.

Second, successfully fishing with the dry fly is a tremendous boost to one's ego. There is very, very little that one can really feel superior

about these days. We live in a society that is increasingly mass-oriented. The individual does not have too many opportunities, but being a good dry fly fisherman is one. I have personally found nothing much more rewarding than to land a nice 12- or 14-inch trout, and then look up and see perhaps some youngster or some less successful bait fisherman looking my way and hear him call, "Hey mister, what are you using for bait?" It is most satisfying to respond, "A number 18 Adams spent wing" or "A number 16 Ginger Quill, lightly dressed." Generally a look of consternation and puzzlement crosses his face as he says, "What's that? I never heard of that." But by that time I am back to my casting and probing another likely looking spot. Lately, I have been using smaller and smaller flies, down to size 24, and have discovered a new satisfaction in landing even a twelve-inch summertime trout on such miniscule hooks. In short, I have done something unique — something that most people have not experienced.

Next, fishing the dry fly is filled with the unexpected. Let me cite a few examples to show you what I mean. One evening while fishing Spring Creek above Lemont, I noticed (as I had learned to over these years) that a substantial brown trout was coming out from his hole in the bank to take a fly from the surface at regular intervals. I timed him and confirmed that approximately every fifty seconds he would rise. I noted also that the fly he was taking could be matched by the light Cahill.

I bent on a light Cahill, dipped it in my silicone bottle and flicked it back and forth until I figured 50 seconds had gone since the last rise and then made the cast. It was the most perfect cast I have ever made in my life, about two feet above where the trout had been feeding and about a foot from the bank right in his lane. As the fly settled gently as thistledown towards the surface of the water I got ready for the strike that I knew would come. Suddenly, a bird swept down from nowhere and when my fly was no more than six inches off the water, grabbed it, and tried to fly away. There I stood. I felt like a small boy at the circus waving one of

the papier mache birds back and forth on the end of a stick, for there was that bird above me doing "figure eights"! I could not believe my eyes.

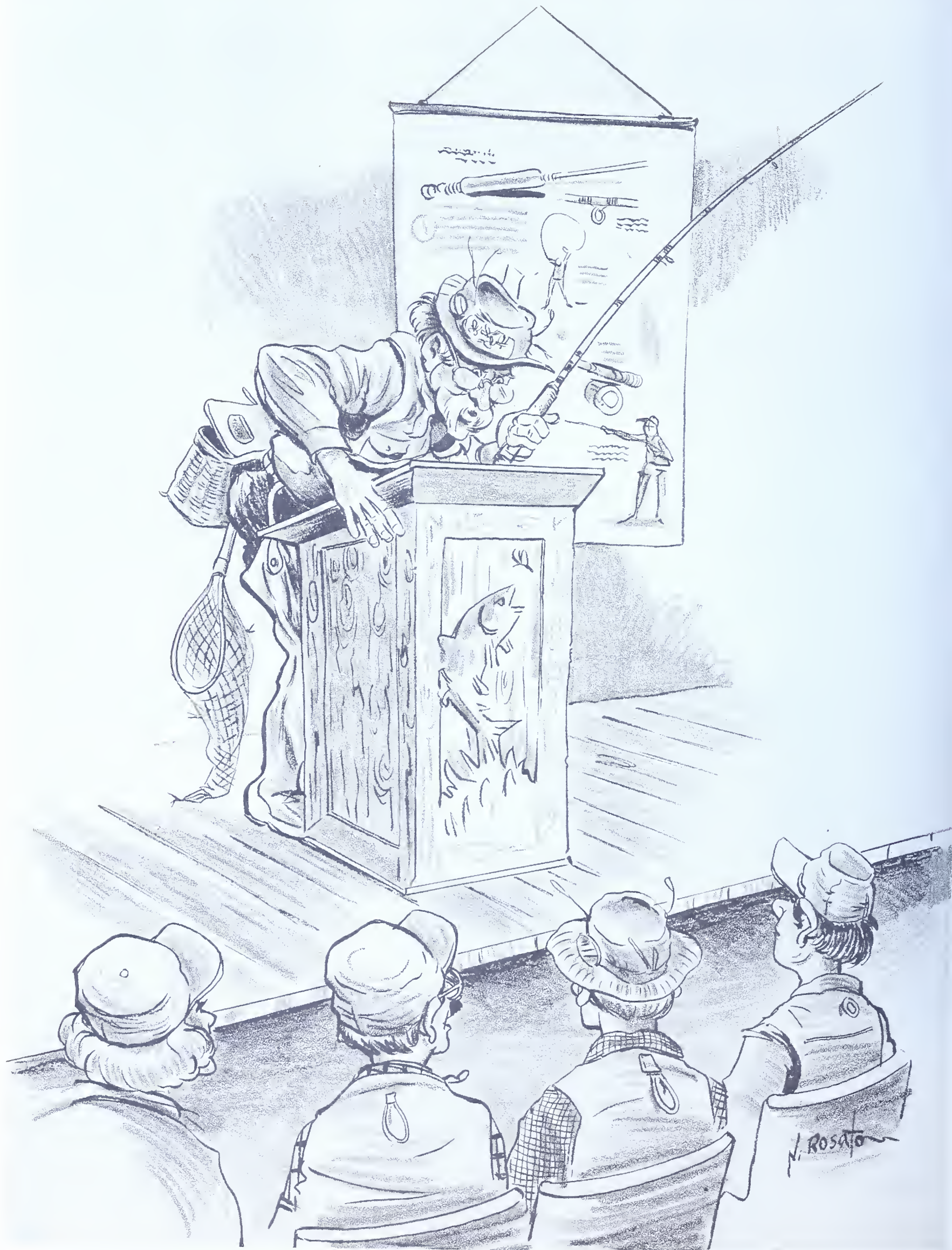
I called to another fisherman and said "Do you see that bird above my head?" He said "Yes." I said, "He's on my line." He said, "Did you snag him?" I said, "No, he took my fly in midair." I reeled him in and as gently as I could held his wings while I worked the number 18 light Cahill from the corner of his mouth and released him. I suppose he would have enjoyed telling the story, too, as much as I have enjoyed telling it.

Then there was another occasion along Stone Creek in Huntingdon County. There was a pool that was inaccessible except from above and I had to float the flies downstream. I much prefer to cast them upstream. But I would float the fly downstream and try to raise it, lift it off the water, dry it, and float it again. I had floated it several times with no success. Thinking I should move upstream to a better place, I started walking up the shallow riffles dragging the fly behind me in the deeper water. Suddenly the rod was almost jerked from my hand by a very solid strike of a brown trout that actually had struck that skipping, skittering fly so hard that he had hooked himself. I have tried that deliberately a couple of times since, but it has not worked again.

On another occasion I was fishing Tionesta Creek and had a large flat dead backwater about six or seven inches deep behind me and as I backcast once I felt a break in the finish of my line where I held it in my left hand, so I let the fly settle to the surface of this flat water behind me and inspected the break in the finish. Imagine my surprise when I started to power the rod forward to begin a cast and found that I had securely hooked a fat brown trout. These things do not happen very often, but they happen often enough in fly fishing to set it apart from the regular, sometimes monotonous, events of fishing.

Let me describe one of my more successful casts — also marked with a bit of the unusual. While fishing

continued on page 19



the BIT of FLUFF THEATRE presents —

MODULUS SMODULUS

A Scenerio

by G. A. Mayo

SCENE: Heidenberg Diploma Mill

TIME: The Millennium

PLOT: Material, design and construction of fly rods has finally reached its ultimate level of sophistication. Professor Phfurrel is addressing a pre-doctoral class, who, having completed the required thirty years of study will soon receive their PhDs in fly roddery.

“Und zo, gentlemen, ve zee zat ze coefficients of nonlinear differential thermal expanshion conform nizely with ze theoretical models under dizcuzhion.”

The professor pauses, glances at his watch, then leans over the podium, and with a menacing stare at one of the students, resumes.

“By ze vay, Mr. Rheel, graphite is not zpelled viss an ‘F’! These lapzez could get you into trouble!Clazz dizmizzed!”

Rheel stiffens, he blanches to a slate gray (or is it iron blue?), a violent tremor wracks his frail body. The class rises to leave, carefully avoiding the now cataleptic Rheel.

Later, at the faculty lounge, Professor Phfurrel is enjoying a kick in the wrist with some of his associates when the Dean enters. (He addresses Phfurrel)

“Too bad about Rheel . . . by the way, wasn’t he the fellow who knitted the nine-foot salmon rod out of six ounces of steelwool?”

“Yez,” replied Phfurrel, “a brilliant tegnizhun, but no dizaipline . . . never would have made it in ze real world!”

And so the plot thickens; or, does it congeal? No matter, mankind has been served and another potential misfit weeded from the ranks. (Curtain, thunderous applause, etc.)

Sound a bit Orwellian? Perhaps, but flipping through various periodicals, I find more and more space devoted to the cosmic wonders science has provided the angler while less and less is assigned to full-color photos of grinning tourists holding aloft giant trout and salmon. It is with the former the balance of this article is concerned; I have no quarrel with the latter. Tourists should be allowed a little grin now and then.

“Who,” you ask, “the devil, is this guy?”

Fair question. My qualifications are as follows:

EDITORIALLY: Almost nothing-to-nil.

TECHNICALLY: Slightly less.

These claims are based on the following:

1. I have never written or published anything to do with the Nile perch, Himalayan trout, alligator gars, or any form of angling whatever.
2. I have never fished the Gallitan, the Firehole, the Alta, or the Roratorua. In fact, the closest I’ve come to New Zealand, is New England. This has been confined, for the last twenty-five years, to outwitting the hand-fed civil servants dispensed by the fishery depart-

ments in New Hampshire, Maine, and Vermont, with an occasional foray into Canada.

Pedigree established, we proceed.

FLY LINES —

Now here we have an area that might confuse the casual observer. Lines that float, lines that sink, some sink fast - some slow; on others, just the tip goes down! Possibly there are some which sink halfway down while others float halfway up. Double taper, triple taper, rocket and bug taper . . . even some with no taper. Your choice! Materials from nylon and dacron to burlap. Some have fifty million bubbles (count ‘em, folks, they’re all there!). All have finishes slipperier than a Vegas faro dealer. Well and good. But, it’s the guarantee that really holds my interest:

“This line will last a lifetime or forever.” (Presumably, one will come first!)

I bought my first one five years ago. One season and it was in for replacement. A new line was delivered posthaste. With it came an admonishment that certain bug repellants and various other chemicals would compromise the finish. I immediately inventoried my repellants and chemicals. Unable to determine which was the “finish-compromiser,” I discarded the entire lot and

restocked with new brands. The following year I purchased two more lines. These three strings have made the replacement trip on an average of two a year. The new line always delivered with the same form letter that accompanied the first!

In order to expedite my end of the shipping cycle, I drafted my own missive which explains that the line has never been in contact with sheep dip, liquid plumber, or other harsh chemicals — including those packaged in the familiar one-fifth gallon flagons. (This document, printed in raised Gothic letters, on fine vellum, will soon be available to interested readers at a modest cost plus shipping and handling.)

I look at it this way: starting with three lines (costing about fifty skins) and parlaying them into ten lines in five years — the return on the investment assumes rather attractive proportions, so all is well.

We all know you don't hitch a fly directly to the line. You need a leader.

"Now, Sir, these tippetts were chewed to exquisite softness by the women on the island of Martinique."

FLY RODS —

Aside from the bewildering array of material used in rod construction: bamboo, boron, graf (OOPS!) phite, glass, etc., the model availability is in itself mind-boggling. Manufacturers advertise up to sixty styles, lengths and actions from which to choose, the rationale being, I suppose, 1) fly rodders, like golfers, need a different club for every shot; or, 2) Hey — if you can sell 'em, make 'em; or, 3) something else.

If we allow, say, 25% for specialty items: tuna rods, rug beaters, etc., that leaves about forty-five sticks left for the serious fisherman. Now the golfer analogy tells us that they wouldn't make them if we didn't need them. Sooo, let's follow a typical angler into the local hook emporium as he fulfills his end of the manufacturer-customer covenant.

"Well, there we are, Sir, forty-five rods with balanced lines, reels, extra spools, waders and all the peripherals necessary to the complete angler!"

"Flies? Over here, Sir. Yes, that's been a good producer . . .

fourteens, sixteens, eighteens, a pound of each? Yes, Sir! Will that be all? Alright, now let's total this up"

Dum-de-dum, whirr-rr, clickikik . . . *"Here we go, Sir. Now then, a bran sack full of twenties should just do it! A bit stiff? Well, pull the kid out of Dartmouth, cancel a few insurance policies, a friendly loan agency . . . these things have a way of working themselves out."*

How much of anything does one really need to enjoy a pastime? I don't know; few of us do. Ulysses S. Grant must have been an exception. When asked his opinion on a new crop of popular songs, he replied, *"I only know two tunes: one is Yankee Doodle and the other isn't."* This may have limited his value as a critic but I doubt he was confused by any background music.

THE LEARNING CURVE —

(Schools for Fly Casters)

A two-hour drive in a westerly direction from my home in Peterborough, N.H., will bring you to what I believe was the first nationally advertised fly casting clinic in the country. They also manufactured the two rods I own. In fact, one — the seven and a half footer — I trolled a set in the second year of use.

One wet Saturday morning I lugged it back for straightening. Since no one else was available, Wes Jordan, with the aid of an alcohol lamp, took the kink out himself. As I recall it, the year was either 1962 or '63. That morning they were painting the interior of the factory and between the alcohol burner and the paint brushes, he and another gentleman were discussing the state department's embargo on anything from Red China, including bamboo. Like war, politics can be hell. Well, anyway, that's where the school is.

Some years later, while selecting a few items in their showroom, a group of students accompanied by an instructor repaired to the pool in the back of the shop for a lesson. Never one to pass up a pointer or two, I ambled around to check the action. The students, armed with rods, reels, and all the necessary accoutrements, were watching the instructor demonstrate some cast or other.

Although I distinctly remember he really knew his stuff, the fine points were lost. Somehow, the image of a man wearing an African bush jacket topped in a leopard-banded safari hat, casting with a rod made from Chinese bamboo on a hot August afternoon in Vermont was too much for a country boy to handle!

I think in theatrical circles he would be a casting director.

ARTICLES, BOOKS, DEATHLESS

PROSE, ETC. —

Fully equipped and tutored, a fledgling fly flinger gets his first nibble, he rears back. "Fish on!" But, what kind? He need not be concerned. The antics of each species is totally predictable and fully documented: bonefish *sizzle*, grayling *dimple*, bass *lunge*, trout and salmon *arch gracefully*, while tarpon *explode dramatically*. Hits have been known to be "bone crunching," while reels occasionally "scream" or "smoke." In sequence, this can be a painfully unnerving experience. Obviously, recalling the exact maneuver while under stress will be difficult for the beginner. Professionals suggest the following: note the species of interest, consult the literature and jot down the necessary information for each: *lunge*, *sizzle*, *arch*, etc. Then, either, a) have the pertinent data laminated in clear plastic for suspension around the neck; or, b) tattooed on the forearm. I prefer the latter. It doesn't flop around on a windy day, makes an interesting conversation piece, and there is always a ready reference guide just above your fingertips.

A POINT OR TWO —

Combinations can confuse even the experts. A "sizzling" line on a "smoking" reel can mean many things but it's probably a fire in the tent.

A few fish have been omitted. For instance, do parrotfish "squawk"? With a hook in the jaw it seems reasonable to assume they do, but I have never seen it referenced. Attention to detail can be tedious, but mastering the basics is essential to a good casting platform.

Steeped in lore, tradition and debt, our intrepid angler is ready to wade forth. But, where, with what,

with whom? How and why? Take heart, the literature abounds with just information. I had planned on covering this, but pouring old wine into new bottles is a specialty item best left to the experts!

The technical articles should be made required reading. Though I do wish they wouldn't leave out the good stuff. For instance:

$$f_{\max.} = \frac{W(l)^4}{8E \frac{\pi d^4}{64}} = \frac{64 Wl^4}{8E \pi d^4}$$

for those few of you who may have forgotten, is the maximum deflection for a cantilevered beam with uniformly varying load (fish pole). A handy thing to know when you're slogging through the alders to a beaver pond.

'NUFF SAID ABOUT EVERYTHING —

Soap box oratory, though lacking

substance, does have surface area; such is the nature of foam. Gravity being what it is, all things return to earth. Even bubbles upon bursting leave the audience with nothing more substantial than a damp spot on the rug. For the wet carpets, I apologize. For the raised hackles (what else?), I sympathize. And now, with a cop-out, I rationalize. No one should tamper with brand new tradition.

FLY RODS —

In Perry Frazier's "*Amateur Rod Making*," published in 1928, bamboo is cited as being the best material for fly rods. Could be it still is. But then, some folks may disagree — I guess that's why they make rainbows in more than one color!

FLY LINES —

My line return frequency may be well above the national average. Still, that's what happened. How-

ever, coupling a fuzzy knowledge of polymer chemistry with the pounding I give a fly line, the quality of these new finishes is indeed significant. These guys are really doing their homework.

CASTING CLINICS —

Attending one of these courses is no doubt an enjoyable and rewarding experience. But, if after graduation you would like a frame of reference for your progress, try this: in John Alden Knight's "*Modern Fly Casting*" there is a photo captioned "Mr. Charles Ritz of Paris Casting a Tight Bow."

Study it. Then, when you think you are pretty good, remember it. I know with me it's bad for the ego; but, as a bench mark it's one of the best!

THE MEDIA—BOOKS & SUCH —

What can I say? My apologies to the fourth estate . . . the fifth and sixth, also.

Evolution of a Fly Fisherman

continued from page 15

quite late one evening, with but moderate success, I came to a broad, quite shallow pool. As I worked my way slowly through the pool, I realized that there were no rising fish visible. I had reached the conclusion that I was just exercising my right wrist when off to the left as I faced upstream, I noticed some darker water indicating a deeper area, not large, no more than six feet long and about two feet wide right next to the bank; and I thought if there is a trout in this entire area he should be in that pool. A fairly large ash tree grew there and the pool had actually been washed out under the roots of the ash tree. Just beyond the tree at the upper portion of this dark water a dead limb stuck out from the bank. I measured my cast as accurately as I could by false casting, for I wanted the fly to alight just short of the projecting limb, but misjudged. The fly settled about two feet beyond the limb and I thought if I try to work the fly up over that limb it is going to snag and then I will have to wade up there and disturb the pool. So I started pulling the line in very cautiously wiggling the rod

tip hoping that I could somehow flip the fly up over the limb. As I pulled the fly closer to the limb it was skittering a bit on top of the water and just as I lifted it clear of the water a lovely brown trout tore out from under the bank and grabbed the fly in midair. His momentum carried him out into the stream, the leader was flipped free of the limb, and I found myself doing battle in that shallow water with a very fine trout. I finally brought him to net. There he was, 14½ inches of brown trout, all through an accident.

One normally tells about the larger fish he catches, but let me mention the *best* fish I caught last year. In August, while fishing the upper stretch of Spring Creek, I noticed a tiny rise in the still backwash of a rather large pool. Knowing that a large trout does occasionally feed almost imperceptibly, I cast a number 20 Adams to the rise. The take was immediate and as I gently set the hook, I felt a fish, but an exceedingly small one. Thinking I had caught a minnow or small chub, I hurriedly stripped in the line. To my great surprise and pleasure, I found myself inspecting a perfect miniature brown trout exactly two and one-fourth inches long. I consider that trout the best of last year because it proved to

me that anti-pollution and conservation efforts do pay off: brown trout are again spawning in Spring Creek. Only the fact that I was using a tiny dry fly enabled me to gain that bit of evidence. As I carefully removed the hook and placed him in the water, I mentally made reservation for a future engagement.

These gleanings of unusual catches with the dry fly are but indications of the unexpected. Add to the unexpected the visual sighting of the rise, the quick response, the hookup, and the immediate flurry of surface action as the trout is hooked, and you gain a dimension not provided in any undersurface type of fishing. I have been hooked by it. And at last, over a period of some thirty-five years, I have slowly evolved into a fly fisherman. You do not have to follow my way. You do not have to follow a trial-and-error method. Join a trout fishing group somewhere or get a friend who is willing to teach you, but learn how to fish with the dry fly. You will find that the entire sport takes on a new exciting dimension and that you as a human being will be changed also. Fishing for trout on light tackle is the highest form of fishing. Taking trout on the dry fly is the best kind of trout fishing.

Pennsylvania's First Rearing Marsh



Marsh rearing site, center right, on Mudlick Run

IS IT POSSIBLE THAT A LAKE COULD STOCK ITSELF WITH SUPPLEMENTAL SPORT FISH, RESULTING IN INCREASED CATCHES FOR THE ANGLER?

AN EXPERIMENT IN AN OLD PENNSYLVANIA MARSH HAS THROWN SOME NEW LIGHT ON WARMWATER FISH CULTURE AND MANAGEMENT.

by James Meade
Aquatic Biologist
Research Section
&
Dan Bourke
Fisheries Technician
Management Section

In recent years, fishery workers in Michigan and several other states have reported favorable results from sport fish rearing attempts made in protected marsh areas. Following their lead, the Pennsylvania Fish Commission developed its first marsh rearing site at Glendale Lake, Cambria County, in 1974. Approximately 2,250 tiger muskellunge (Northern pike X muskellunge) fry were reared to 3 inches in the marsh with little or no care required. The tiger muskellunge fingerlings were then released into Glendale Lake.

The Function of a Controlled Marsh in a Hatchery Production System

Limited warmwater hatchery space in Pennsylvania, as elsewhere, requires that only a given number, or poundage, of fish be reared to a desirable stocking size. While there may be plenty of room in the hatcheries for egg incubation and even for the hatching and nursing of fry, fast

growing warmwater sport fish, such as members of the pike family, require enormous amounts of food and soon outgrow the available space unless their numbers are strictly limited.

When the carrying capacity (amount of fish a certain unit can hold) of a rearing unit is exceeded the numbers of fish must be thinned. Thinning and culling (removal of the small and weak) may be done periodically by hatchery personnel. This is usually accomplished by either stocking or discarding the surplus fish. Natural thinning, by disease, parasitism, physiological stress, or cannibalism, may also reduce the numbers of fish down to — or below — the carrying capacity of the supporting environment. One alternative to the expensive business of hatchery rearing and direct stocking is found in the idea of stocking fry into an area where predation and cannibalism are held to a minimum. Such a protected area is the rearing marsh.

The Glendale Marsh; Development and Operation

In the fall of 1973, marsh areas around Glendale Lake were investigated, and with the assistance of two Pennsylvania Fish Commission en-

gineers, Roy Frank (now retired) and Ken Hoy, a suitable site was chosen. The site, an old but relatively intact beaver dam area, was surveyed in early February and design plans were drawn up. Construction on the area was begun in late February.

A major obstacle in the construction or development of a controllable marsh rearing facility was the presence of a stream flowing through the site. This stream had carved a large hole through each of two old beaver dams, one dam being approximately 200 yards upstream from the other. A necessary first job was to dig a ditch which would divert the stream from *above* the upper dam to *below* the lower one. This step allowed the marsh to dry. Water control devices or "bulkheads" were installed in the holes of both dams, between which the rearing marsh would eventually lie. Construction of the diversion ditch and both bulkheads was rapidly completed by the Pennsylvania Fish Commission's southwest region maintenance crew, under the supervision of foreman Clyde Buhl.

As it turned out, site preparation was not quite finished. Two floods in early April caused extensive damage to both dams and to the diversion ditch. However, with the basic construction completed repairs were quickly made, enabling the marsh to be filled shortly thereafter. Once the marsh was completely filled the water entering the marsh was reduced to a small flow necessary to maintain proper water level in the marsh. The marsh flooded about an acre and a half and averaged about 30 inches in depth.

Now that the marsh was completed, only one problem remained: that of assuring an adequate food supply. On April 18, a culture of water fleas, or *Daphnia*, was introduced into the marsh to supply a suitable forage base (fish food) for sport fish fry.

On May 17, 25,000 tiger muskellunge fry, each less than one inch long, were stocked into the marsh. Except for making minor flow adjustments, nothing more was done to the marsh for the next five and a half weeks. During this rearing period the marsh attracted many kinds of

wildlife, especially waterfowl and water birds. The waterfowl and water birds inhabiting the marsh included several kinds of ducks, two types of herons, kingfishers, and even a swan. Some of these birds, especially the kingfishers and herons, were suspected of feeding heavily on the small tiger muskellunge in the marsh.

Biweekly checks on the marsh indicated good growth of the infant tiger muskellunge. They doubled their size in the first two weeks. Finally, the tiger muskellunge were

released into Glendale Lake during a slow ten-day drawdown of the marsh. An estimated 2,250 fish, or nine percent of the initial stocking, survived and were released. These fish averaged just over 3 inches in length. Three individuals, suspected of being cannibals, measured between 5 and 6½ inches.

What Did It Prove

This study proved that in one instance, 2,250 tiger muskellunge could be reared to fingerling size without care or artificial feeding in a

Fish Commission personnel stock marsh with tiger muskellunge fry.



1½-acre regulated marsh in Pennsylvania. Requirements for such rearing are:

1. A suitable marsh site.
2. Installation of an impoundment with a water level control device.
3. Sufficient manpower to regulate the marsh — relative to water level, general maintenance, and release or harvest of fish.
4. Sufficient sport fish fry to stock the marsh at a density of 10,000 to 20,000 fry per acre.

From this study it would appear that marsh rearing is a suitable method of increasing warmwater production without the need for additional major investments of time and money always incorporated in new hatchery construction. If regulated marsh rearing areas were included in construction plans for such large impoundments as Lake Raystown (Huntingdon County), many desirable sport fishes which do not reproduce satisfactorily could be reared economically to bolster the lake's sagging sport fish populations.

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

It is not our intention to suggest that marsh rearing should replace warmwater hatcheries. Even the state of Michigan, which has an extensive marsh rearing program, is investing in warmwater hatchery expansion and improvement. Hatcheries provide better control, reliability, and increased production warmwater fishes. However, marsh production which would supplement hatchery stocking and natural reproduction could be the shot in the arm that some of our Pennsylvania lakes need to provide their best fishing.

The staff of Prince Gallitzin State Park, in which Glendale Lake is located, is not alone in their interest in and enthusiasm for marsh rearing. Officials of Nockamixon State Park in Bucks County have also ex-

pressed great interest. These people indicated they would help install and help maintain at least one marsh rearing site there as soon as marsh rearing areas are selected and approved. The marsh rearing idea is especially appealing to park officials because the park staff can help increase the numbers of sport fish in the park lake and make fishing there more inviting for the vacationer.

But does marsh rearing really make any difference? Why even bother with a protected marsh? Why not just stock fry directly into the lake? Well there are some very good reasons for using marshes. The marsh rearing study is truly a study in aquatic ecology. For instance, biologists who surveyed Glendale Lake could find no natural reproduction of northern pike, even though spawning requirements were apparently met. In fact, numerous sitings of spawning pairs of northern pike had been made. It was finally surmised that massive panfish populations, particularly those of brown bullheads and black crappies, were

eating the pike eggs and fry. None were surviving to become fingerlings and adults. And, there was no place that the northern pike could go to get away from these predators.

The controlled marsh provides protection from fish predators and eliminates interspecific competition (competition of two different fishes for the same food or resource). By flooding a field or marshland and allowing zooplankton and minnows to grow, but at the same time screening out the predaceous fishes as well as the competitors, the sport fishes stocked in the marsh can feed safely and are able to grow rapidly. By releasing these fish as fingerlings, which are generally too large for most panfish predators to tackle, the chances of survival to creel size increase tremendously (this is the theory behind hatchery rearing). The marsh-reared fingerlings are soon able to forage on the smaller panfish, which in turn provide catchable panfish of a more desirable size as well as more large sport fish for the angler.

The lower head maintained water level; served as catch and holding box.





This view of the nursery shows its screening arrangement. The club has experienced some vandalism and theft of fish by partial destruction of the screens.

CO-OP NEWS

by Bill Porter

One of the very attractive settings for a cooperative nursery is the good fortune of the Quittapahilla Rod and Gun Club, Lebanon County. A hard-surfaced lane leads between two rows of trees to a parking area between a converted barn and a fine old stone house. The area is attractively landscaped and a small stream, Baughman's Run, meanders through the yard and in the background is a matching stone spring house from which flows the water to supply the nursery. It is a most appealing rural scene.

And a lot of the credit goes to Jim Karnitz, landowner. He has provided the club a no-charge lease and seems dedicated to the cooperative nursery in particular and to conservation in general — a second fortunate circumstance for the club.

The nursery itself has some unusual characteristics that makes it a bit unique among other raceways in the area. Initially, it was constructed of over 100 railroad ties and then covered with aluminum sheeting. The combination has worked well and is a first of its kind although some other clubs have used ties for basic construction. Screens cover the raceway, keeping out normal predators; and the seventy-five foot length is divided into three bins.

Thus to all intents and purposes a rather typical arrangement other than the aluminum. There are, however, some other distinguishing features, which deserve attention. As Joe Waybright, nursery manager, pointed out: "We grow eight-inch trout in eight inches of water." And that's about the truth of the matter. The level of the spring that feeds the raceway, and the level of Baughman's run that parallels it and provides an auxiliary water supply, are about on a level with each other. The drop in the raceway is so slight that to get an exchange of water and an outlet that works, the depth of water in the raceway is, of necessity, shallow. Joe was a bit wrong in one statement: the "eight inches of

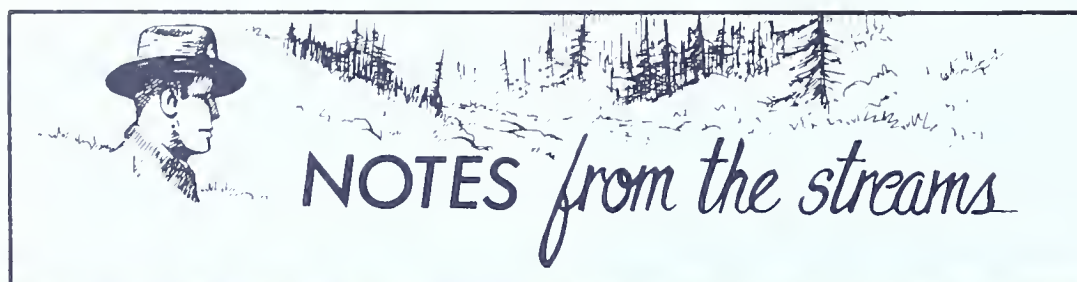
trout;" the fish are bigger than that at the end of the growing season and are of good body shape.

Now all this sounds rosy and great and it is; but, as has been customary, some gloom sooner or later falls on all clubs. The Quittapahilla Club has had its share of trouble. Nitrogen produced a problem and a minnow-saver at the head of the raceway solved the issue. Then Agnes and Eloise, each in turn inundated the area, burying the raceway and most of the springhouse under several feet of silt-laden water. These adversities were also met in turn. The most recent, and by far the most annoying, has been the human predation and vandalism, which seems to be on a steady increase across the state, according to reports. So the club is human after all . . . has had, and is having its problems, and yet is surviving.

The results of the survival are stocked to the pleasure of local anglers in such streams as Baughman's Run, Trout Run, Conewago Creek, and the Quittapahilla Creek. This latter stream has had some pollution problems and the club has been doing some stream improvement work, trying to get it back into shape. Waybright and his son, Dale, both felt that the group's efforts were not entirely in vain.

And more needs to be said of the trout themselves. The growth is excellent with one of the factors being the nearly year-round constant temperature (48-50°F), allowing for continuous feeding and growth. The diet, pellets, works well and doesn't seem to indicate any reason for change. As an extra bonus to area anglers, the club retains about 400 holdovers each year, which adds a reasonable sprinkling of trout in or near the 20-inch range with each batch of yearlings released. Total count for a given stocking year is in excess of 3500 fish with about two-thirds being browns and the remainder brooks. A sprinkling of rainbows may show up in the holdover trout.

And that's it for the Quittapahilla Rod and Gun Club and their benefactor, Jim Karnitz, and what they are collectively doing about trout fishing in their part of Lebanon County.



REAL GLUTTON!

While on patrol on Conneaut Lake over the Labor Day weekend, I met a fisherman who found a dead northern pike and brought it ashore because of the unusual circumstance causing his death. The 23-inch northern had tried to swallow a 12½-inch largemouth bass. In the process, the bass, instead of following "Jonah's route" — to the belly of the whale," somehow was diverted out through the gills of the pike, causing them both to die in that position. It seems that the pike's eyes for food were bigger than either his mouth or stomach could handle!

Warren Beaver
Waterways Patrolman
W/Crawford County

INDOMITABLE!

While on my way to the Northeast Division Headquarters last summer I had to take a second look at a very heavily bearded, long-haired person who was hitchhiking along Route #118. Now, although I have seen many people hitchhiking in this vicinity, I have never seen anyone hitchhiking with: two back packs, two life preservers, and a canoe that must have been 16' or 17' long! I noticed that the hitchhiker also had a pair of cartop racks laying alongside of the canoe. Later the following day I had a conversation with the proprietor of Sheldon's Lunch, a business which is near the road where the hitchhiking canoeist was seen. Shelly told me the hitchhiker came into his establishment for refreshments and related this story:

He was canoeing from New York, via the Susquehanna River, south and west; and, when it appeared that a large storm was inevitable he removed his canoe at Tunkhannock and was given a ride to the Sweet Valley area. He told Shelly his destination was the West Branch of the Susquehanna at Williamsport and then north.

Later in the day when I returned to that area where I first saw the hitchhiking canoeist, he was gone. His overland portage in this 1976 year was almost 80 miles. Bon Voyage — and good luck from the Pennsylvania Fish Commission whoever you were. Even with all of the odds against getting any motorist to stop for a hitchhiker with a large canoe, I can't help wondering how much quicker this 1976 portage was made than one made over the same route in 1776?

Claude M. Neifert
Waterways Patrolman
N/Luzerne County

A FIRST!

This incident was related to me recently by James Kazakavage, Game Protector from Washington County. It seems Jim was fishing a small lake in the northeast which contained a good bass and pickerel population. He noticed feeding activity in the lily pads and decided to try one of those small, rubber, artificial frogs we've all seen. On his first cast with this frog he had a tremendous

strike and experienced a hard fought battle for the next five minutes. "Kaz" was certain he'd hooked a nice bass or pickerel and as it began to tire, he excitedly scanned the water for a look at his prize. Upon getting a look at his catch, he was amazed. There, with that rubber frog buried in its throat, was the largest bullfrog he had ever laid eyes on!

I've heard many "fish" stories, but that was my first "frog" story.

Gary E. Deiger
Waterways Patrolman
Greene County

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

LUCKY EDDIE?

The pleasures of fly fishing are many, but recently I observed an angler enjoying none of them. I had just pulled into our FLY-FISHING-ONLY area when a certain fly fisherman was beginning his performance. His first cast caught in the tall grass behind him. After unhooking his fly from the weeds, his second cast resulted in his line wrapped and twisted around his rod. It took some time to untangle this mess and he wasn't looking too contented with this pastime.

When on his third attempt to land a fly on the water, his fly instead hooked into the back of his vest, he packed up and left, probably to purchase a cane pole and worms!

Fred Mussel
Waterways Patrolman
Lehigh County

TAIL? OR TALE?

One is always hearing about strange things that happen: like the big one that got away: or, "Boy, you should have been here *yesterday* they were really biting!" Well, this story drifts out of Southern York County. The story, as I heard it, centers around Lake Marburg. It seems that a man was exercising his miniature poodle along shore and he would throw a stick into the water and the poodle would fetch it. Well, this was done several times and on about the fourth retrieve a wake came from the rear and a large fish's tail was seen as the poodle disappeared from sight. Hhhmmmm! Well, that's it. No names were mentioned here to protect the sane.

Warren W. Singer, Jr.
Waterways Patrolman
Adams & N/York Counties

NO DEAL!

Deputies Hudy and Horton were on motorboat patrol one evening on Rays-town Lake when they spotted a boat in a restricted area. Inspection revealed a rather serious PFD violation and the defendant was informed that a citation would be forthcoming.

While all this was going on, the deputies spied a sixteen-gallon keg of beer that was partially empty and a live rattlesnake in a see-through plastic bag. The occupants of the boat joyfully told the officers how they had captured the rattlesnake and offered to "Make a Deal," just like on TV. They wanted to swap the deputies the live rattler if they would forget the citation! Needless to say, they didn't accept.

James T. Valentine
Waterways Patrolman
Huntingdon County

SNEAK ATTACK?

Deputy Stanley Long and I were floating our canoe down the Upper Jordan Creek on patrol before the opening of trout season. We had just passed under an overhanging tree when a good-sized object fell out of the tree and landed in the creek, just missing the canoe.

Hearing the splash, we turned to see what this flying object might be. We both spied a soaked and scared-looking gray squirrel paddling like mad for shore. He looked quite undone as he reached land and slogged up the nearest tree. We can't figure out if this was a botched ambush on his part or if he was just a clumsy climber.

Fred Mussel
Waterways Patrolman
Lehigh County

SURPRISE!

While on patrol at Sylvan Lake, Deputy Waterways Patrolman Kipp and I observed a young man fishing from a dock and he was not displaying any fishing license. When we approached him, he placed the rod down on the dock and started to walk away. When I requested to see a fishing license, the man pointed to his ears and mouth shaking his head in a negative manner indicating that he could neither hear nor speak.

After asking around at a nearby cottage, I was able to find the man's sister who explained to me that the man could only read lips. When I explained options of settlement for the violation, arrangements were made for the young man to meet with me at the Northeast Region Headquarters at a later date to pay his

fine. When I met the man and filled out the necessary paper work, I handed it to him to read — indicating where it needed his signature. When he had done this, he stood there looking at me and I pointed out on the slip as to his paying me the \$25.00. He took the money from his wallet and handed it to me. Then, much to my surprise, he said in a very distinct voice, "I would like to buy a fishing license."

Claude M. Neifert
Waterways Patrolman
N/Luzerne County

"FISHED OUT"?

Several of the "fished-out" streams in Adams County produced brown trout in the 3-pound to 6½-pound class in late spring and early summer. It is really surprising how these fish survive the pounding these streamstake. Just by sheer percentage they should have been caught well before reaching the 18-inch mark instead of the 20-inch plus category. "Mother Nature" takes care of her children well.

Warren W. Singer, Jr.
Waterways Patrolman
Adams & N/York Counties

TROPHIES GALORE

For the past two years on the opening day of the regular trout season, Harveys Lake has been kind to the angler in giving up some of its trophy fish. Last year on the opening day a local angler caught and recorded a citation lake trout. This year another citation lake trout was caught during the early opening hours: 35½" in length. Along with some more large lake trout which I saw caught was a walleye which measured 26 inches in length. It was quickly released as this species was not yet in season.

Claude M. Neifert
Waterways Patrolman
N/Luzerne County

VISITOR FARM AFAR -

Last year I mentioned that an angler from Alaska had fished this area. It seems that another Alaskan has visited us here in Pennsylvania. While going through license applications, I saw his application. Maybe the "grass" is greener here.

Warren W. Singer, Jr.
Waterways Patrolman
Adams & N/York Counties

LITTER-LY KILLED!

Last October Herbert Turberville and Mark McClain of Emporium found a 24-inch brown trout about dead in Sugar Bay of Kinzua Dam and turned it in to my headquarters. This trout was caught in a piece of bedspring which it had worked about half way up into the body. The wire had worn through the backbone and caused the death of the nice trout. I guess even the fish face many hazards in life.

Stanley G. Hastings
Waterways Patrolman
Cameron County

HOW COME?

I checked a canoe with two persons on board. Both had personal flotation devices. *Their dachshund was wearing a life preserver especially made for him!* Other people I checked today could not even see the need to have devices in the boat for them or their children. How can some people care so much about their family members, including their "wiener dog," and others so little?

Robert Lynn Steiner
Waterways Patrolman
S/Luzerne County

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

"LIGHTNING" STRUCK TWICE!

On July 11, 1976 at 5:00 p.m., I had to arrest a young man for fishing without a license at Harveys Lake. This is not an uncommon occurrence while enforcing the Fish Law, but it was interesting to note during a check of the division office files that on July 11, 1975 — at 5:35 p.m., I arrested the very same person, at the very same spot, on Harveys Lake for fishing without a license. The morale of this story is: **law breakers beware**, history does repeat itself. Had we not had a difficult time in docking the patrol boat in very shallow water, we would have probably made it come out "one-year-to-the-minute!" What a way to celebrate and remember the Bicentennial year!

Claude M. Neifert
Waterways Patrolman
N/Luzerne County

One for the bassers . . .

Fly Tying *the* *“stonecat”*

by Chauncy K. Lively
photos by the author

When I was a youngster I had heard stories of big bass snatching baby ducks from the surface, leaping out of the water to intercept low-flying birds and, on occasion, engulfing water snakes. I wasn't sure I believed all this; those were the days when the tall tales of Baron Munchausen were popular and I suspected it was all an embroidery of the truth. I had never seen a really big bass and the smallmouth of my experience on Ten Mile Creek, spunky though they were, didn't seem capable of such monstrous deeds. But later, when I was in the service, I caught a Texas bass that had devoured a baby squirrel and I became a believer. Now I'm con-

vinced that, at some time or another, a big bass will throw a haymaker at just about any living being he can get his hungry maw around. The infinite list of bass lures, a dazzling array of sizes, shapes and colors, would seem to support this contention. But the lures whose success as bass-catchers has kept them popular over the years seem to share a common characteristic in the water: the ability to convey the suggestion of life.

In fly rod lures the choice is narrower than that of spinning and plug-casting lures because of limitations on the amount of weight that can be thrown by the long rod. The lifelike action of sinking fly rod lures becomes a function of lightweight materials that can be activated by the current or by the angler's retrieve, rather than by mechanical means, like the propellers or metal lips built into plugs. Soft plumage like marabou, ostrich or peacock is in common use, as is hair of several types.

A number of years ago I began experimenting with a different application of fur to represent the delicate gills of the burrowing mayfly nymphs. A narrow strip of muskrat belly hide was cut, with fur filaments still attached, and this was wound around the length of the hook. The result resembled palmer hackling, with the fur standing out at right angles to the hook. The fur was then trimmed close to the hide both top and bottom, leaving a thin row of filaments on each side. The method produced the desired effect and I was fascinated with the action of the fur in the water because it was more responsive than any material I had ever used. A few flies were also dressed with the fur untrimmed and while these didn't resemble mayfly nymphs, they had a certain “bassy” appearance and I felt the approach had promise.

We gave the untrimmed fur-on-the-hide flies their first trial on the Allegheny River and near the mouth of Sandy Creek they gave us a sporty afternoon with the riffle bass. The trouble was, the trout-sized flies were too small to attract the bigger bass and I felt that a larger version, with longer fur, was in order. So, back to the drawing board we went and the “Stonecat” was the result. Dressed on a size #4 hook, with long, flowing fur over a formed underbody, it is a wiggly, shimmering mouthful for braggin'size bass.

Rabbit fur is ideal for the main body of the Stonecat, with a shoulder of shorter and denser muskrat fur in front. To prepare the fur strips for dressing, select a piece of the appropriate hide with a straight edge. Clamp one end of the hide solidly (a clip-board works fine here), with the fur side facing down, and hold the other end taut. Then, with the corner of a sharp razor blade, cut a narrow strip (1/8" or less) from the straight edge of the hide. The blade should barely penetrate the hide to prevent cutting the fur. It takes a steady hand and a little practice but you'll be surprised how quickly and accurately the job can be done. Of course, soft hides, scraped as thin as possible, are easiest to work with. Most of the stiff guard hairs should be plucked from the muskrat strip because they inhibit the action of the fur in the water.

Any bass bug outfit capable of handling #7 to #9-weight forward-taper lines will cast the Stonecat adequately. It should be soaked well before use; otherwise, it will sit on the surface like a haystack. It fishes just under the surface with a floating line, or, with a sinking line its buoyancy makes it rise between pulls. In flat or still water the retrieve should be in subtle twitches to activate the breathing of the fur; but in riffles, little more than guiding the lure through likely spots is necessary. The uneven current does the rest.

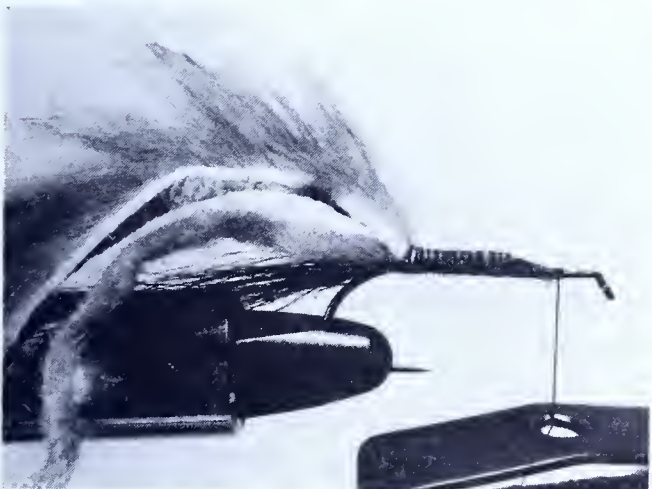
I don't know what bass take the Stonecat for; a little stone catfish, perhaps, or maybe a tadpole. But whatever, the tantalizing, taunting motion of the free-flowing fur suggests mealtime.



Dressing the Stonecat:

Left: cut a narrow strip each of rabbit and muskrat hide, with fur attached. Rabbit strip should be about 4" long and the muskrat, 2". The muskrat fur should be darker than rabbit's. (See text for detail.)

Right: bind black thread near bend of a size #4 regular shank hook and tie in a small bunch of stiff, black hair (skunk or bear) as tail, slightly longer than shank. Wind thread forward over hair and trim excess butts.



Left: tie in a 4" strand of heavy yarn (any color) and wind thread over yarn, back to bend. Cut a taper in the tip of the rabbit strip and tie in at bend.

Right: wind yarn to build a tapered underbody and tie off well behind eye. Wind thread over underbody in firm, spaced turns back to bend and then forward to front of yarn.



Left: grip end of rabbit strip with hackle pliers and wind forward in close turns. Tie off at shoulder and trim off waste. Fur should stand out like palmer hackle.

Right: tie in muskrat strip at shoulder and wind two or three turns. Tie off and trim excess.



Left: stroke muskrat fur back and build a neat head with thread. Whip finish, trim thread and apply head lacquer.

Right: here's the wet Stonecat, ready to fish.



“Leaky Boots”

continued from page 5

A LONG TIME AGO!

A few days ago, a few friends and myself were discussing when Pennsylvanians first needed fishing licenses. Would you please print a reply. Thank you very much.

I have been a reader of your magazine for nine years and have enjoyed them very much. Keep 'em coming — I have just renewed for 3 more years.

SAMUEL L. PIZZUTO
Reading

Anybody who went fishing on January 1, 1922 needed a fishing license, Sam. Ed.

TAKES EFFORT

I would like to compliment you on a fine magazine. The fly tying articles are excellent. There are some selfish people who feel that this magazine should contain only the articles that pertain to their interests. However, since many fishermen tie flies and own boats, the articles which help these people should continue in your magazine. In reply to J. Slawich's letter in which he calls pan fishermen “Dorks,” I feel he is completely wrong. It is true any person with a pole can catch one, but, with a fly rod and nymph it is entirely different. It takes a lot of effort to work through some of Lake Arthur's shoreline, but the reward is good, two 8½-inch bluegills, which fought admirably on my 8-foot telescopic fly rod. Try it sometime, Mr. Slawich, you might be surprised.

LAWRENCE J. LESNIAK (age 12)
Pittsburgh

SEEKS ANSWERS . . . ACTION!

Dear Mr. Abele:

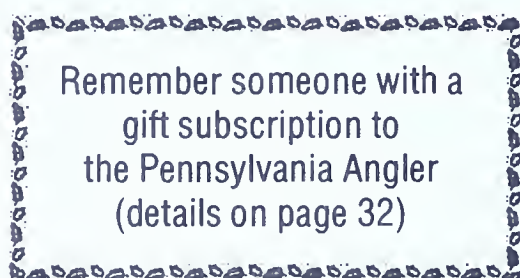
It is extremely ironical that your editorial “Shad in the Schuylkill? It's not too far away!” arrived here via Pennsylvania Angler in the same week that the Pottstown, Pa. Mercury disclosed “River Pollution”! It was very gratifying to read your editorial and so terribly disheartening to read the Mercury article.

With mixed emotions I submit this article to you as information from, as you put it, “water quality watchdogs.” For too long a time southeastern Pennsylvanians have put up with the polluted black scar known as the Schuylkill and we don't want to see the Fish Commission's plans jeopardized, now that the ball is rolling with Philadelphia

committing itself to the construction of a fish ladder at Fairmount Park Dam.

Accordingly a lot of essential primary work will have to be accomplished first. Is the coal silt contained and the acid coal mine seepage really sealed off along the upper Schuylkill branches? Is critical industrial waste runoff being monitored? Have oil sludge impoundment dikes been rebuilt foolproof, such as at Douglassville?

Do the watersheds of feeder streams come up to par to abate soil erosion and/or pollution runoff? Could Possum Hollow atomic-electro plant ever create a thermal barrier problem in adjacent Schuylkill waters? Are there other municipalities cheating on sewage treatment?



Are the Army Corps of Engineers going to remove islands in the Pottstown area soon? Will the (devil mud) coagulate formed by the combination of soil and coal silt plus sewage, oil sludge and chemicals be removed also or at the same time? Will Pottstown continue to ignore the Clean Streams Act for another decade or two?

What ever the answers be, I wish you Godspeed on your Anadromous Fish Restoration Program.

Very truly yours,
FREMONT U. KEIM
Pottstown

(Editor's Note: The article to which reader Keim refers, “River Pollution,” by William G. Reinecke, Mercury Staff Writer, dealing with an inadequate municipal sewage treatment facility, appeared in the August 2, 1976 edition of the Pottstown Mercury.)

WHY? HERE'S WHY—

Recently in the mail I received a copy of “*Pennsylvania Basic Boating*.” I feel this is a very worthwhile text which every boat owner in Pennsylvania should read thoroughly and completely. However, as I read the inside of the front cover, I see that this text was published by “OUTDOOR EMPIRE PUBLISHING COMPANY” in Seattle, Washington.

Seeing as how part of my boat registration fee went into the publishing and manufacturing of this text, why was it published in Washington? Surely there

are many competent printing shops in Pennsylvania that could have printed and mailed this book!

Also, the bottom paragraph of the inside front cover referring to specific state laws contained herein have been compiled from sources *believed* to be the most recent is not too reassuring. If this book were printed in Pennsylvania, the laws could have been quoted word for word.

In these times of escalating costs, I feel that the Pennsylvania Fish Commission could save considerably in the cost of manufacturing and printing any further such publications. Thank you.

TERRY ALTEMOS
Hosopple

Early this summer Pennsylvania's registered boaters received a home study course entitled “*Pennsylvania Basic Boating*.” Its purpose was to satisfy a long-standing need to provide basic boating safety information free and direct to the boatman and his family. This mass mailing program was developed by the Bureau of Waterways and funded cooperatively through the Fish Commission's Boat Fund and a federal grant-in-aid program administered by the U.S. Coast Guard.

The text was developed by modifying a boating safety text, *Better Boating*, copyrighted by Outdoor Empire Publishers of Seattle, Washington (the copyright restriction **REQUIRED** that Outdoor Empire do the printing). By including information about the Pennsylvania Fish Commission and specific references to Pennsylvania's boating laws and regulations, the *Better Boating* text was adapted for the state boater. Production and distribution was accomplished at a cost of less than 57¢ a copy.

All information regarding Pennsylvania's boating laws and regulation is current and accurate. The disclaimer printed inconspicuously in the inside front cover advised the reader to relieve the printer of responsibility in the event a legal question is raised.

Thus far the response to the program has been gratifying. Numerous final exams and thank you notes are being received daily. If this continues we will be satisfied that a real and beneficial service was provided to the registered boaters of Pennsylvania.

Alan B. Kegerise,
Marine Education Specialist

CHRISTMAS PRESENTS—

In your June issue of the Pennsylvania Angler, there was an article “*Plugman of Ellwood*” that I was particularly interested in. If at all possible, could you please send me this gentleman's address.

The reason for my interest concerns my father. He is *74-years-young* and has been a dedicated musky fisherman since 1924, fishing both in Pennsylvania and the Kiwatha Lakes in Ontario, Canada. His most productive lure was a wooden Heddon vamp that I identified in the picture of the "Plugman" article. Since this lure has been out of production for over 20 years I can't think of a better gift for my father than several of his old favorite plugs under the Christmas tree this year.

Just a side note. I have been a member of the Air Force for the past 15 years and presently on a three-year tour of duty in Okinawa, Japan. The past 10 years I have been an enthusiastic subscriber to your magazine. I have read every article with deep satisfaction knowing at least one state has an energetic fishing and environmental program for its residents. My only regret is that each year fishing is becoming more fantastic and because of my job I can't enjoy the benefits of your work. Even though I have fished all over the world nothing gets my adrenalin flowing any better than your stories of some of the great fishing in several of my old familiar streams and lakes. I hope the Fish Commission continues to maintain their high professional philosophy and avoid today's ever so common occurrence of political interplay. I have one small request in closing: just save one of those monstrous muskies for my line when I retire. Keep up the outstanding work both in the field and on paper.

A Continuous Supporter
MAJ. JAMES L. WALTERS
Okinawa

Those muskies are so thick now, Major, it's getting hard to get your plug back without teeth marks in it! Fear not - we'll save one!

Ed Latiano, "The Plugman of Ellwood," lives at 317 Ninth St., Ellwood City, Pa. 16117. Anyone wishing to contact him should write to that address; or, call him, if you wish, at 412-758-7141. Sorry we skipped the details in the original story. Ed.



SUBSCRIPTION EXPIRED?

I want my subscription renewed for three years. I just noticed my last issue will be September which I have not as yet received. You never notified me of this and since we both (wife and I) enjoy your *Angler* we do not want it to stop arriving. We both are anglers. Thank you.

LEON J. KOCHAN
Reading

Leon, you are one of literally hundreds who have written in with just about the same complaint: "... you never notified me ..." etc. Every subscriber is supposed to receive a notice one month in advance of his subscription's expiration; then, a second should arrive with a subscriber's final issue. These notifications are in the form of pink or green envelopes which should be hard to miss. But

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(details on page 32)

whether they slipped out; or, were never inserted, who can say? At any rate, each subscriber can check out his expiration date quite easily. Look at the numerals to the right of your name on the mailing label. If "1176" appears, this is your last copy; any other similar combination lists the month and year of expiration. To the right of those numerals you'll notice either the numerals "3" or "75" followed by an "N" or an "R" - these numerals merely indicate the amount you paid for your subscription (\$3.00 or \$7.50); "N" indicates to us that you were a NEW subscriber at the time; "R" means your subscription was a renewal. So, everybody turn to the back cover now, look at your mailing label, and check your expiration date until we get the bugs ironed out! Ed.



That's Kevin Chrobak, above, with a pair of largemouth bass taken through the ice at Black Moshannon Lake. Minnows were used as bait. Measuring 20" and 21" they totalled over 11 pounds.



Charles D. Gaza, above, caught that 31-inch Chinook at Lake Erie on a wobbler. It weighed 12 pounds.

That's Ronald Fitch, left, with a 37-inch northern pike taken from Kinzua Dam's fabled "Chappel Fork." The 13 1/2-pounder fell for a Mepps spinner for Ronald.

Ashore & Afloat

by Gene Winters

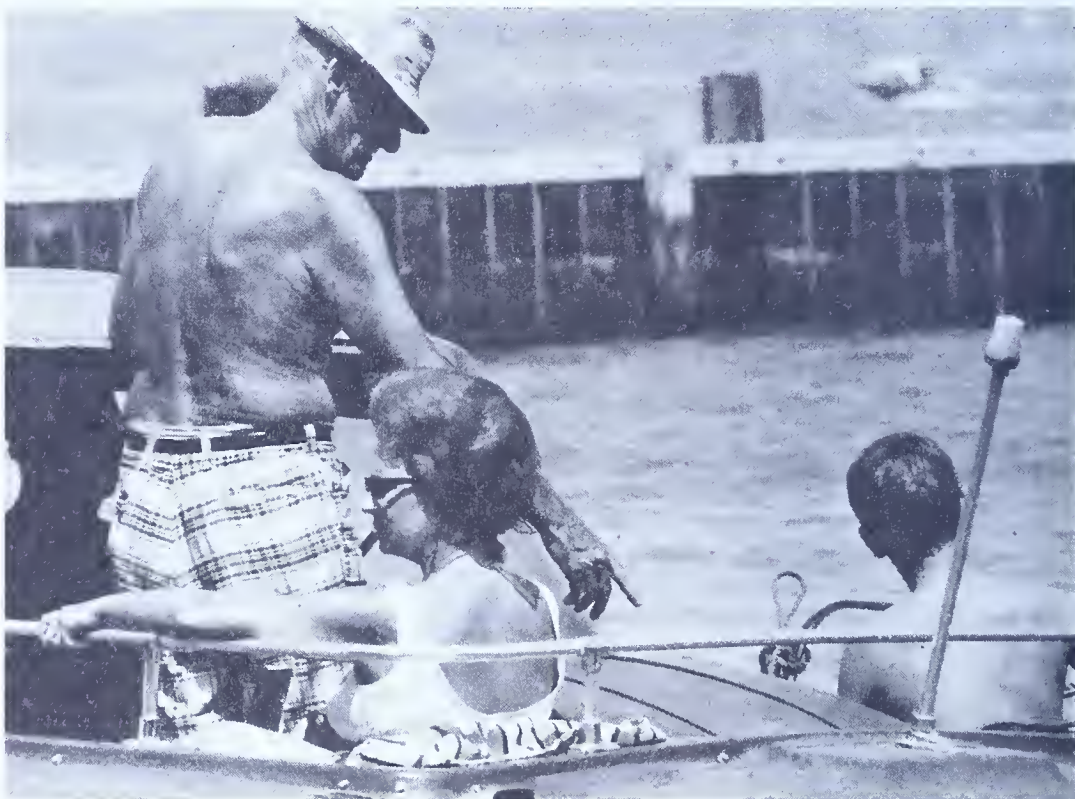
Early this past summer, after unavoidably overhearing a few dockside conversations, I began to question this whole boating business. Highly heralded as the greatest combination of recreation, relaxation, enjoyment and adventure ever packaged by man, I wondered if people *really enjoy the sport or try to convince themselves they do?* Like many pursuits, does the sport lose its luster after the novelty wears off?

To this point, I selected at random about twenty boats and spent countless hours in the shadows of the boatyard . . . camera and notebook at hand. I wanted to see how these boats were used and how often. The marina owner helped in the selection by informing me which boats were not only docked there for the season but also which trailered boats were regular and frequent users of the ramp. Thanks to an assortment of telephoto lenses, ears like radar and some strategically placed bushes and trees, I was able to remain largely unnoticed. Only during the last several weeks of the observation period did I venture forth and strike up conversations with the boatowners and occupants. Even then, I did not mention my association with the *Angler* lest the respondents coach their answers and comments in what they might feel were more favorable perspectives.

Feeling much like one must when involved in clandestine spy operations, I accumulated pages and pages of notes to accompany the photographs. When I came into the "open," my coding system allowed me to decipher my scribbling in a manner that divided the boats by



*Although all boaters are really out to have
the time of their lives, not all of them succeed.*



owners/occupants into three classifications or groups. Coupled with my best Mike Wallace interview style, I pursued my labor of love. Group "A" came to be the persons who were new to boating; this was their first year on the water. Group "B" were persons in their second year of boating and the third classification, appropriately enough called Group "C," had three or more years on the water. Since I here and now disclaim any pretense of conducting a scientific sampling, you are also free to use your instinct in a liberated manner. Search the accompanying photos and see if you can tell which boaters fell into which group.

Without exception, those who had boated three or more years intended to keep right on doing their thing. The only thing they owned up to was slowing down the pace somewhat. That is to say, they were not racing up and down the river like a busy ant colony on the water's surface. They planned to spend even more time next year at anchor, swimming, fishing or just plain relaxing.

Group A, the new boaters, as might be expected, were racing up and down the river like someone was going to pull the plug any minute and drain all the water away. (Now, before you write the editor, I know not all new boaters are continuously



*"Hoping" that everything is going to be fun
and games — without proper preparation — is folly.*



in motion but my group admitted to it and I saw them do it.) This group was also the most perplexed of those under observation. Simply stated, in many cases they didn't know what they were doing but they didn't know they didn't know what they were doing . . . or not doing. (That sentence will simply drive ye olde editor up his birch-paneled walls!)

With one exception, this gang would be back on the water next year, for better or for worse. The one exception says, because of his family's wishes, his boat goes up for sale next spring. Talk to Mom and the kids and you'll get a different reason. Endless hours fishing at an-

chor under a sweltering summer sun . . . kids bored and restless . . . Mom burned like she was just retrieved from a malfunctioning toaster . . . and no rest room. Guess who's really to blame for this new boating family being in such a desperate state of resignation?

Which brings us around to our third group. Here, in the second year of boating, the seven-year itch appears five years ahead of its time. This group had a summer of mixed situations and mixed reactions. This was the year they really felt at home on the water and Dad had "the feel of the wheel." There was more order, more routine, more confi-

dence. Mixed in with the joys, however, was a sprinkling of nagging problems and things going wrong. Overconfidence led to shoddy preparations and poor seamanship. Too often it was jump in the boat, hit the key and go. Too-infrequent checks on wind and weather conditions and forecasts. No checks for gear, personal supplies, full fuel tanks, dependable batteries, extra shear pins, etc. No inspection of trailer winch lines, wheel bearings, trailer rollers, etc. As a result, a summer peppered with unnecessary family dissensions if not downright fueding.

A final observation. By trend or coincidence, none of the first-year boaters in my sampling had a single hour of boating instruction although most insisted they still planned to take a course. In the second-year boaters, only 3% had received any boating instruction. Among those with three or more years on the water, 17% had received some boating instruction. All percentages include family members as well as the regular skipper. Glean what you will from my sampling and statistics but one thing is unequivocal from my observations and conversations: those with even a smattering of boating education not only intended to *stay* in boating, they definitely *enjoyed* it more!

Although this column was written at least partially tongue-in-cheek, it follows that if you are a boater you fall into one of the three categories I witnessed. What you do during the coming winter months, how you spend your nonproductive time, could have a major influence on whether or not you and your family remain boaters and how much real enjoyment you get from the sport. There are monthly boating magazines to be read; supplier's catalogs to be scanned; scores of informative and interesting books on the subject and countless boating courses (correspondence and classroom) to be taken to enrich and expand your knowledge.

You invested hard-earned cash in your boat, trailer, and equipment. Why not invest some time in yourself and reap the dividends from boating you originally anticipated?

Sometimes you have to work a little harder to play a little easier!

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: No matter how shy they are when they are resting, brown trout will roam all over a stream when they are on a feeding spree. They will even prowl in water scarcely deep enough to cover their backs. Most of this seemingly reckless foraging is done under the cover of darkness.

Spinnerbaits are good lures for use in heavy cover if they are worked at top speed. Hooks ride with the points up, and the spinners attached to wire above the lure body will not often snag if the retrieve is fast enough. This means that spinnerbaits can be fished in places impossible to fish with other lures.

Cleated rubber boots are not 100 percent safe, particularly after they are worn for a season. If the cleats are worn smooth, use marine glue to cover them with strips of indoor-outdoor carpeting, which will provide as much security as felt soles.

Wet flies with snells attached are not good buys. For one thing, the flies usually outlast the snells. It is better to buy wet flies and to tie snells on them, using stiff nylon and an improved clinch knot.

Most stream minnows are three inches or less in length. Buy or make streamer flies to match.

Glass rods are tough and durable and do not need great care in storage. But during the nonfishing season, ferrules and line guides should be carefully inspected. Worn hardware should be replaced, and new wrappings put on metal parts if the old wrappings appear worn in the slightest.

Don't throw away beaten-up, bedraggled wet flies. Keep them in a box for frequent use, for trout may regard them as "buggier" than brand new flies.

Moths will have a feast on artificial lures made of fur and feathers if they are not stored properly when not in use for extended periods. They can be kept in plastic boxes or glass jars into which a few moth crystals have been dropped. Containers should be large enough that the lures are not packed together.

Change a double-tapered line frequently during the fishing season, and always at the end of the season. That will keep the tapered end that is attached to the reel from developing kinks that are hard to remove.

Check weed guards on spoons. Make sure the tip end of the guard is just in front of the point of the hook.

Limp monofilament is ideal for use as a leader in casting, and it can be used as a leader even on a trolling line if it tests 18 or 20 pounds. Limp mono is flexible and almost invisible in the water.

Color in a fly-casting line does not disturb fish. Tests have proved that fact. The advantage in using a light green, cream, or even white line is that it is more visible to the angler and can be a help in keeping close attention on the lure being used.

Six-foot leaders are good enough in surface fishing for bass, but a longer tapered leader is best. Try this formula: a butt section of 12-pound test nylon (.019 in diameter), a middle section of 7-pound test (.014) and a tippet section of 5-pound test (.012).

A floating line is an absolute must in fishing for bass with fly rod surface lures. When fish are in deep water and likely to be feeding on the bottom, a sinking lure should be used, and with it a sinking line is best.

Color is of little importance in lures used in night fishing for bass, trout, or any other species of fish. In darkness, fish cannot distinguish colors, but they do see the size and shape of the lure outlined against the sky.

*How many of your fishing buddies are Angler readers?
A few? None? Why keep all the good news to yourself?
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Angler

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1976

It was a busy year . . .



Government agencies are addicted to fiscal years. The Commonwealth uses July 1 to June 30 for fiscal purposes; the federal government, October 1 thru September 30. For most of us, our years are mixed up enough because outdoorsmen think in terms of *seasons* — more so than years consisting of any particular twelve-month period. One thing is certain: they go by much quicker than they used to and one event blurs into the next.

It is quite typical (and proper, I suppose), for people to greet me with, “How’s fishing?” But with one’s time and thoughts preoccupied with more pressing things: meetings with state and federal agencies . . . with sportsmen . . . with the General Assembly . . . with the members of the Commission . . . I’m almost tempted to respond with a note of frustration, “How should I know?”

But, to be perfectly honest, I have to admit that the Director’s year is not one of being completely chained to a desk, nor are all of his moments tied up in smoke-filled rooms. Looking back at 1976, I can stop feeling sorry for myself because there were certainly enough fascinating and diverse activities to compensate for the less than “fun” times.

New Year’s Day: just to say we did it we went fishing on the Juniata; caught a 34-inch carp on a muskie lure on the third cast. Memories still linger of good pickerel fishing through the ice in Pike County.

February: a month of running around to meetings — mostly our own — Cooperative Trout Nursery meetings, Law Enforcement regional meetings, Cooperative Research Unit conferences, and the ever-present shad-related meetings.

March: more meetings — National Marine Fisheries Service, North American Wildlife Conference, the Pennsylvania Federation of Sportsmen’s Clubs . . . more Cooperative Nursery meetings.

April: an Opening Day with 90° temperatures left a memory that will linger, as will the co-hosting of the Northeast Fish and Wildlife Conference at Hershey.

May: a mixture — a Pine Creek float trip . . . workshops at Woods Hole Oceanographic Institution . . . fishing Wallenpaupack . . . sailing on Leaser Lake . . . and more meetings.

June: full of government meetings but included my being with Trout Unlimited’s Executive Council on Penns Creek and at Spruce Creek.

July: inspected fish ladders on the St. Johns River, in New Brunswick, summit meetings on shad, and with the Soil Conservation Service.

August: we were hit with both Hurricane Belle and the possibility of Kepone and Mirex in Spring Creek; the VanDyke Shad Hatchery was working. We had some great experiences with the Youth Conservation Corps and Title X projects, stream improvements on Hicks Run; and, we began the meetings of the Regional Marine Fishery Management Councils under the 200-mile extended jurisdiction Act.

September: National Marine Fisheries Service in Washington, the Mid-Atlantic Regional Fisheries Management Council began to function, the Susquehanna River Anadromous Fish Restoration Committee met, the Pennsylvania Federation of Sportsmen’s Club held their fall convention, and we saw the Lake Erie Fishing Tournament become a reality.

October: the month began with some salmon fishing in Lake Erie and a Commission meeting, followed by the Atlantic States Marine Fisheries Commission in Williamsburg, and the Northeast Fish and Wildlife Director’s meeting in New Jersey. There are remembrances of surf casting and a barbeque on a deserted beach. The Mid-Atlantic Council met again and we tried surf clamming off the Maryland shore.

November: as the first few inches of snow began to accumulate, we spawned 400 wild brown trout from a Union County stream to help West Virginia’s wild trout effort. It was Mid-Atlantic Council again . . . then some turkey hunting in the snow.

December: two more Mid-Atlantic Council meetings . . . family home for the Holidays.

Another year went by and we don’t know where it went. It was busy and intensely fascinating . . . fraught with problems for which no simple answers were immediately available.

We think 1977 is going to be another good one. We are going ahead with the programs and projects that are more and more enlightened every year — and everyone will benefit.

And, if there is such a thing as a New Year’s Resolution, it will be that we are going to see more and more of the action from the outside. We can’t possibly make objective decisions without it.

Ralph W. Abele,
Executive Director

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CONTENTS

Convertible Ice Fishing Shelter by George E. Dolnack, Jr.	8
Kinzua Panfish Derby '76 by Waterways Patrolman Paul Sowers	10
Fishing in Pennsylvania <i>AN ANGLER SPECIAL FEATURE</i>	14
Activities of the PFC — a Chronology by Lois Howard	16
Blue Dun for Everyone by George W. Harvey	20
Coughing Fish by Dean Owen	23

FRONT COVER:

Some fly fishermen just don't care to stop, regardless of the weather!
Mike Wirth, of Allentown, is just one such fisherman who
enjoys the year-round sport provided by the Little Lehigh River's
Fish-For-Fun section. Photograph by Tom Fegely.

BACK COVER:

Lake fishermen will often find open water during the first few weeks
of the winter trout season. That's Whipples Dam, in Huntingdon
County. Photograph by Russell Gettig, Staff Photographer.

MONTHLY COLUMNS

FISHING OUTLOOK	2	FLY TYING	26
LEAKY BOOTS	4	CO-OP NEWS	28
TAKING A CLOSER LOOK	6	BOATER'S BULLETIN BOARD	29
STREAM NOTES	24	ANGLER'S NOTEBOOK	30

James F. Yoder, Editor

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A typical array of ice fishing tackle: skimmer, ice spud and auger, tip-up, "stove," and minnow bucket.

fishing outlook

by george e. dolnack, jr.

More than just a handful of anglers are under the illusion that fishing and warm weather are synonymous. This myth gives them a reason to retire their tackle until the spring peepers beckon them to dig it back out again. What they are missing is the bonanza of fishing that the winter angler looks forward to.

To start with, there is the winter trout season on lakes of 10-acres or more that begins on December 1st

and lasts through February 22, 1977. The creel limit is reduced to three per day.

Baits that work during the spring opener also do well now. Spinners cast from shore catch their share of trout this time of year too. Contact your District Waterways Patrolman to find the lake nearest you that is open for trout.

There are other waters around on which trout fishing is permitted during the winter season. In Beaver county, 1.3 miles of Big Traverse Creek from Raccoon Lake Downstream to Raccoon Creek is available to southwestern anglers. The same goes for 1.2 miles of Brady Run's South Branch from Brady Lake to the confluence of Brady Run.

Little Chartiers Creek, in Washington county, for a short distance below Canonsburg Dam is also open for winter trout.

On the Allegheny River, for three-quarters of a mile below the Kinzua Dam, trout fishing is a year-round affair with a daily creel limit of three.

In addition, trout enthusiasts can

fish twelve months of the year on a three-mile stretch below the Youghiogheny Reservoir at Confluence, in Somerset and Fayette Counties.

If none of the above appeal to you, then perhaps casting a fly on one of our FISH-FOR-FUN projects is more to your liking. On these runs, it is flies only and fishermen are permitted to keep one trophy trout 20 inches in length or longer. Fisherman's Paradise is the exception, where no fish may be killed.

A few modified FISH-FOR-FUN projects where spinning lures may be used are also waiting for the anglers. Consult your *Summary of Fishing Regulations and Laws* issued with your fishing license for further information on these projects.

Cold weather anglers also rate warmwater discharges as productive spots for warmwater species such as bass, walleyes, muskies, crappies, carp and suckers. These outflows are scattered about the state and can usually be found along our rivers where there is a power plant or other

facility that uses the water for cooling.

Fishing in these areas throughout the winter is probably better than any other spot in the river. Depending on the outflow's temperature and size, the water's temperature can be affected for as far as a half-mile downstream from the outflow.

In these areas, try minnows, jigs and spinners for some fast action and a full stringer.

By the end of the month ice fishing will begin to come into its own — especially across our northern tier — and provides some top quality sport. Anglers who participate in this winter activity find that it is one of the best times of year to catch fish, especially the panfish.

For the newcomer to ice fishing, the hardest thing is getting started. Don't let the lack of a fishing partner, equipment, or know-how stop you. To help smooth the way, here are a few tips.

To see what ice fishing is all about, your best bet is to take an exploratory trip. For your initial excursion, pick a mild day, preferably one that is sunny with little wind. Dress

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

warm, wear gloves, a hat and insulated boots. Then head for a spot where ice fishermen are known to congregate.

Mosey around and take notice of the tackle that is being used and how it is transported. Note the various types of devices that are used to cut holes in the ice. Observe the ice fishermen's techniques and don't be afraid to ask questions.

You'll find that ice fishermen are among the friendliest outdoorsmen around and they will be more than glad to answer your questions. By the time you are ready to leave you should have a pretty good idea of what is involved.

You might be surprised at how little gear it takes to get started. A \$20.00 investment will get you an ice spud, ice skimmer, a jigging pole and

a few jigs. Anything else can be rounded up from your present inventory of tackle.

If you are short of cash, forego the jigging rod and use one of your conventional spinning or bait casting rods with the lightest line you have.

And, if you are really in a pinch you can do without the spud for the time being. There are always holes that have been abandoned by ice fishermen who have moved on. For a skimmer, take an old soup ladle and drill one-quarter inch holes in it.

As far as jigs go, you can make some yourself by taking some old trout flies that are tied on a #10 hook and trimming the hackle and feathers off to form a tight body; then, firmly pinch a "B" or "BB" size splitshot to the hook just below the eye. Paint each splitshot a different color after it is crimped on the hook.

Mealworms, to bait your jig with, are readily available at any pet shop and will run about \$1.00 per hundred. If you have a farmer friend, you can find mealworms in the grain scattered on the barn floor. Getting started in ice fishing is really easy!

This young whitetail doesn't seem to mind the winter trout anglers on one of our northern tier lakes.





"HOW COME" —

I want to try and help Gary Davis of Erie who has a problem catching small trout on flies. I have been fishing with a fly rod since I was 15 years old and I am 55 years today; things have changed in that time. I have tied my own flies and streamers for years.

Fly fishing is experimenting on what the trout will take — sometimes a fly of different shape or color, etc. Anytime you're catching small fish on a fly, change to a streamer or a bucktail. Select light colors — work to the darker shades. In deep water a weighted streamer should do well. And, another good point, don't fish a small streamer, stay at a size 2, it helps to catch large fish. If Mr. Gary Davis sends me his address I will send him a few streamers at no cost to help him along. He can advise his friends on his try with a streamer. Thank you, Ed.

Helping hand,

RAY LINDEMUTH
1506 James St.
Sinking Springs 19608

"PLEASE TAKE CARE!"

After reading R. A. Bednarchik's article, "Close," I'll tell you one. About six years ago I was fishing a lake in northern Wisconsin. One fellow was in the bow, I in the middle and one fellow in the stern. The fellow in the bow fished most of his life. He made a sidearm cast and hit me in the head with a plug. I couldn't get my cap off so we lit out for the shore. We were fifteen miles from a hospital or doctor. Luckily we had a dentist in the group.

I always carry alcohol, bandages, salve, iodine, single edge razor blades and a good wire cutter. Well, the dentist clipped the hook off the plug and I was able to get my hat off. Then they put alcohol on my head and sterilized the razor blade and cut my scalp to get the hook out. Two more inches and it might have been my eye! I'm 73 years old. Please take care!

R. H. LA FOUNTAIN
Upper Darby

GONE . . . NOT FORGOTTEN!

Three years ago, with opening day of the trout season *only* eight weeks away, my wife, Judy, decided this was to be her year to begin to fish, and asked where to get her license and could the "kitty" spare enough for her very own rod and reel.

After the initial shock died away, I readily said "Yes!" After about ten years as a loner, why not take on a partner? License in wallet, gear in hand, a practice session was in order. Casting should be learned before serious fishing begins.

Out to the shores of Lake Erie we went. The middle of February does not present ideal weather conditions for what we had in mind. Temperature around 35° and winds about 25 miles per hour are best enjoyed through the window of your den. After a few casts, it was determined that I, the expert, had better start all over again. "You've got to relax," I said, taking rod and reel into somewhat *stiffened* fingers. Slowly, with simple instructions, and in a most "relaxed" manner, I brought my arm forward and watched the graceful arc of sinker, line, rod and reel as they sailed into the lake — to be seen no more.

The wounded look Judy gave me said a volume! But, since then, we often laugh about it and she's become quite a fishing companion. Let me tell you how I taught her to bait a hook . . . that will have to wait. My arm is swollen from my tetanus shot!

To the Pennsylvania Fish Commission, thank you very much for all your help. You have made a well planned 1977 vacation in Pennsylvania possible. Thanks for processing my orders for the "Angler" and other related materials.

ED MEDERSKI, SR.
Buffalo, N.Y.

NEW SLANT —

One day, while watching my grandfather fish at the Raystown Lake, his line snapped, sending his lure, and bobber about 50 feet out into the water. My grandfather sent me to put my bathing suit on so I could retrieve the lure and bobber. While I was gone, the bobber disappeared as if it were hit by fish. Because the water was deep I used a raft to go after it. I followed the bobber around for about a half hour. Then the bobber came within my reach, when I brought it up I had a 12-inch largemouth bass.

SUSAN PLUMMER (age 12)
Johnstown

TAKES FEW HOME —

Just a few lines to praise your article on fly tying — wonderful pictures and flies. I've been fishing flies for trout and bass for many years. For anyone interested you can get Ray Bergman's book called "Trout," and you will find patterns there that some books don't have.

I live in Reading and two years ago we lost our fly stretch due to a land sale. I hope in the near future we can get another stretch for fly fishing even if it's FISH-FOR-FUN, which I do . . . I take very few trout home. There's nothing more exciting than to take a fish on a fly — even panfish. Keep up the good work on your fly articles. Best of Luck!

JAMES WALTERS
Reading



The Susquehanna River in Wyoming County produced Joseph Wilkas' 34-inch carp. His big fish weighed 15³/₄ pounds.

"TURNED OFF"

I have just received the first issue of *The Pennsylvania Angler*, a gift subscription from a very good friend of mine. On page six and seven, the article, "Taking A Closer Look" was interesting . . . interesting because the anglers that are talked about, Pennsylvania's feathered anglers, are the only anglers I enjoy seeing . . . maybe it is because these

anglers don't "stick" an innocent worm on a hook to fool the fish.

I enjoyed most of the article but in the very first paragraph I was almost "turned off" from reading, as the writer says, quote:

There are probably very few Pennsylvania anglers who fish for the sole reason of putting meat on the table.

This is a distasteful statement as so many fishermen and hunters say they hunt for food . . . the writer proves that most of these groupies (sic) of people do not hunt for food. Until the word "sport" is (sic) removed from hunting and fishing, anti-hunting and anti-fishing groups will continue to be "kindled."

Thank you and I will continue to read *The Pennsylvania Angler* but I would like to see lots of just plain Nature stories.

Norman L. Ives
Outdoorsman
— Wildlife Photographer
Wildlife Acres (Posted)
Genesee, Penna.

Editor's Note: With the exception of changes in punctuation and the addition of italics we have printed reader Ives' letter as it was received. It is doubtful that these feelings are shared by even a significant minority of our readers. Our only comment will concern his closing sentence. We have published "nature stories" for many years but in almost every instance they were closely related to one of the magazine's reasons for being: fishing. Its name would mandate that, would it not? Ed.

"TERRIFIC PEOPLE . . ."

As native Pennsylvanians now living in Massachusetts, we were delighted to see your article on Raystown Lake in your June issue. We decided to vacation there the last week in August.

We spent a very enjoyable week camping in the "primitive area sites" in the Susquehannox Camping Area located on the dam. The park rangers were very courteous and the camping areas were extremely clean and well managed.

When our vacation ended we prepared to leave, only to find we were unable to climb one particular road which was wet from a rainstorm the evening before. After several attempts, the situation proved impossible, our car simply would not haul our camper up that hill.

We spoke to the Corps of Engineers and they kindly had several men assist us. After considerable time and effort, we were finally able to get both car and camper out of the park. However, without their help, we would have had to wait for the roads to dry which would have delayed our trip home by at least a day, if not two.

We were extremely grateful for their kind help and wanted you and everyone to know that, besides providing a wonderful place to camp, the Raystown Lake Corps of Engineers are really terrific people who care. It was really refreshing to know there are still people around who will help when help is needed.

I sincerely hope you can print my letter. By the way, the fishing was great!

MRS. ALAN J. SLAPINSKI
Blandford, Mass.

THUMBS DOWN!

I believe that some editorial guidance should have been offered to Mr. Dolnack in the writing of his August "Fishing Outlook."

Although I tie my own flies for trout fishing, I use live bait (i.e., worms, minnows, etc.) for bass and musky. I see nothing wrong with this type of fishing. I also condone the use of animals (rats, mice, etc.) for medical research. However, with the recent pressure being put on hunters and research scientists to stop the killing of animals, I believe that fishermen should be very careful about calling someone "ingenious" who uses a live mouse for musky bait. The entire paragraph could have been omitted without detracting from the article. Such actions should not be encouraged or praised. I hope you publish this letter so that other readers will know that at least some fishermen find such a choice of bait appalling. Let's not give fishing and the *Angler* a bad name.

MICHAEL I. SIEGEL, PH.D.
Associate Professor of
Physical Anthropology &
Orthodontics
University of Pittsburgh

P.S. Was the hook through the lips, the back, or the tail?

Unfortunately (or *fortunately*, as the case may be), Dr. Siegel, the placement of the hook was not included in author Dolnack's article. Sorry we can't furnish you with this information, but we are publishing your letter as requested. Ed.

LIKES RAYSTOWN COUNTRY —

In regards to the article you published about Raystown Country, I read it word for word. It couldn't have come at a better time. We had been planning a trip there for about six months and the story helped us immensely. Wish you would do additional features such as this.

Also, after my husband read the August issue's, "Fungus — fuzz on fish," he stated that during the fall he was going to fish only on weekdays, since the story

read that on *weekends* the trout get fuzzy blotches on them.

One more question. How is the edition of the Cook Book on Fish coming along?

Keep up the good work. All your articles are interesting, helpful and educational.

MARY RAJKIEWICZ
Harleigh

You're pulling our leg, Mary! The article merely spoke of weekend visitors "looking over the operations." Have hubby drop by some Wednesday, he'll be surprised. The Cook Book is coming along but it's a big job — just be patient. Ed.



Walter McIntyre's Shenango River
36 $\frac{1}{8}$ -inch flathead catfish
tipped the scales at a
healthy 24 pounds.

Remember someone with a
gift subscription to
the *Pennsylvania Angler*
(details on page 32)

HE'S NEVER FISHED HERE!

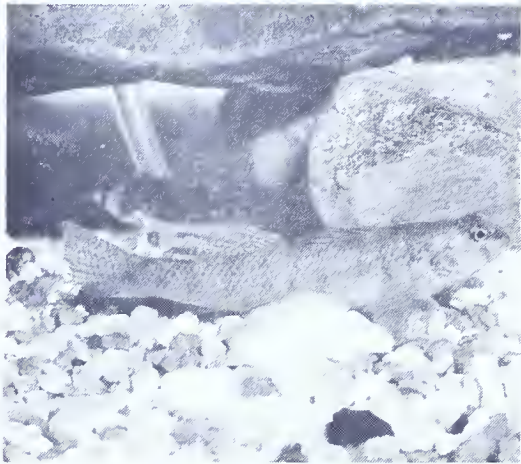
Enclosed is a check for a three-year renewal of your fine magazine. Although I never have fished in Pennsylvania, your magazine has increased my desire to do so. I think the best testimonial to your good work is seeing some of your stories reprinted in other publications. Continued success.

DOUGLAS D. BARNARD
Bloomfield, Connecticut

We surely hope the temptation soon overwhelms you, Doug! C'mon down, you're welcome anytime — the sooner the better! Ed.

MORE "LEAKY BOOTS" . . .
please turn to page 32.

Fish Commission biologist Dick Marshall displays a 20-inch walleye netted during a survey at Lehigh County's Leaser Lake in late summer. (Photo courtesy Allentown Call-Chronicle)



The Johnny darter is probably the most common of Pennsylvania's 18 species of darters.



Taking A Closer Look

by Tom Fegely

A FINE FAMILY OF FISH

Sometimes it's interesting to take a scientist's view of the many species of fish that we regularly seek. Some are surprised to learn that the rainbow and brown trout are not members of the same family while others are amazed that the

carp and fathead minnow are, indeed, in the same scientific clan.

The Family *Percidae*, commonly called the Perch Family, is represented by over a hundred species in North America alone. Many of these fish, namely the yellow perch, walleye, and a great variety of darters, swim in Pennsylvania's inland waters. Two others, the sauger and the blue pike, are known to live in Lake Erie. The sauger, though smaller and not as well known, is a look-alike cousin of the walleye. It has also been recorded from the Ohio River drainage in Indiana and Warren Counties and the Beaver and Youghiogheny Rivers. The blue pike is listed as one of Pennsylvania's "ENDANGERED FISH."

It's a toss-up as to whether the yellow perch or the walleye can be considered as the most popular member of the family. In terms of universal appeal, the perch must be voted number one while most serious anglers would probably give the nod to Mr. Walleye. Both, it must be agreed, offer as fine table

fare as can be claimed by any fish family.

Pennsylvania's record yellow perch was an 18-incher caught in Oneida Dam, Butler County, 40 years back. In May of 1865 the recognized world's record perch was taken from the Delaware River at Bordentown, New Jersey. The lunker panfish weighed 4 lbs., 3½ oz. This record is subject to some skepticism because the catch was made over a century ago and no fish of comparable size has been taken since.

Perch are schooling fish and the wise angler will get his line back in the water as soon as possible after catching one. Ice fishermen at Lake Wallenpaupack in northeastern Pennsylvania sometimes take as many as 75 perch from the same hole once a voracious school is located. Small ice flies or jigs, garnished with mealworms, maggots, or wax moth larvae, and active shiners are the top winter baits for these flavorful fish.

Anyone who's ever caught a walleye knows why it is so named. A

These 21-inch walleyes were taken from Beltzville Lake in Carbon County.

pair of large, opaque, glass-like eyes adorn each side of the head giving the fish a ghostly appearance.

The walleye is a common resident of the state's larger river systems including the Allegheny, Juniata, Susquehanna, and Delaware and it also dwells in lakes such as Wallenpaupack, Conneaut, Pymatuning, and many others. Many of the newer and smaller lakes and impoundments of the Commonwealth have also been stocked with walleye fingerlings. They attain a length of 11-14 inches within two years and by the time they are four years old some may attain a length of 23 inches. The average four-year growth, however, is about 19 or 20 inches.

The walleye, also called the "pike perch" in some areas, spawns at night over places covered with rock, sand, or gravel. A single female is usually accompanied by two or more males. The eggs are randomly scattered in two to four feet of water and promptly abandoned by the adults. Anywhere from 30,000 to a half million of the adhesive eggs may be shed, depending on the size of the female walleye.

In one to three weeks the eggs hatch and by fall they attain a length of five or six inches. The females tend to grow faster and attain a larger size than the males. By the time either sex has grown to 30 or more inches in length, however, the relatively fast growth rate slows and these lunkers add only about an inch to their size each year.

Many walleyes are taken through the ice each winter season. Since minnows make up at least 90 percent of the walleye's natural diet, it only stands to reason that minnows, preferably large silver sided shiners, should be the top bait. Successful walleye ice anglers prefer cloudy, overcast days and an accumulation of snow atop the ice to block out the sun's rays. Walleyes are primarily night feeders and the darkness under the ice simulates the proper conditions so that they can be caught at any time of the day. A No. 2 hook, garnished with an active minnow and a sinker above to get the rig deep, 20 or 30 feet down, is sug-



gested for cold-weather walleyes.

The state record walleye is a 12-lb., 36-inch fish caught in the Allegheny River, Forest County in 1951 by Firman Shoff of Ebensburg. The world's record, a 25-lb., 41-inch walleye was caught in Tennessee on August 1, 1960.

Darters, the small, quick, bottom-dwelling members of the Perch Family, average less than four inches in length although the state's largest darter, known as the *logperch*, grows to about six inches.

Of the 18 or so species of darters found in Pennsylvania, the best known is the Johnny darter. Like others of its kind, "Johnny" lacks an air bladder which accounts for its jerky, darting movements. It feeds on microscopic food, chiefly crustaceans and insect larvae. Only two or three inches long, it is identified

by conspicuous dark scale markings on the sides forming the letters "V," "X," and "W."

The swamp darter, Tippecanoe darter, longhead darter, and slenderhead darter are considered as "endangered" in this state. The Eastern sand darter and the least darter are classified as "possibly extinct" in Pennsylvania. The sand darter has the strange habit of burying itself in the sand with only its nose and eyes protruding.

All of these fish: perch, walleye, saugers, blue pike, and darters have similar body plans including an elongated body with two distinct dorsal fins (the front fin strongly spined). Whether we honor them for their sporting ability, taste, or simply their interesting habits, few will disagree that together they make up one fine family of fish.



“CONVERTIBLE” ICE FISHING SHELTER

by George E. Dolnack, Jr.

Thinking about buying a gift for your favorite outdoorsman who has just about everything? Then why not consider a “mountain” or “pack” tent for that special person.

Also called pop-up tents, these small, compact, lightweight shelters are becoming increasingly popular among the ice fishing enthusiasts who use them as ice fishing shanties. Besides being a practical gift, they are a good investment. Easily set up in minutes by one man, they are available from about \$25.00 up.

A couple of manufacturers also make these portable tents exclusively for the ice fisherman. One features a sewn-in floor with a fishing hole (great for jigging), stove pipe with vent flap, and a storm door. If the one you buy does not have a floor, make sure it has an apron around the inside perimeter to keep out the wind.

Anglers erect their tents so that the opening is to the lee side of the wind, facing their tip-ups. When the wind is howling, they can sit comfortably inside and wait for a flag while sipping on a hot cup of coffee.

There's no need to stow the tent away since it can be used year-round on float trips or other overnight fishing trips.



Russel Walker, of State College, prepares to set up his ice fishing shelter on Centre County's Black Moshannon Lake, above. Note that the tent opening faces his tip-ups, above right. It is also on the lee side of the wind. With very little effort and in just a few minutes, Russel has the canvas spread skyward, right. The task completed calls for a steaming cup of coffee, opposite page.



Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)



KINZUA PANFISH DERBY '76

by Paul R. Sowers
Waterways Patrolman
East Warren County

photos by
Russell Gettig,
Staff Photographer

Last winter, a local fisherman made a suggestion that panfishing should be promoted in the Allegheny Reservoir (Kinzua Dam). For those who are not familiar with panfish, they are little critters such as crappies, perch and rock bass which are abundant in this body of water.

Why promote panfishing when the Kinzua area has won national acclaim for some of the finest smallmouth bass, brown trout, musky and northern pike fishing in the East? Well, it is a fact that many fishermen do not know that panfish are delicious eating — nor do they know how to clean or prepare their catch for the table. And, in too many instances these small fish end up in a garbage can.

The question at that time was, “How do you *promote* panfishing?” This question was answered a few weeks later by Northwest Regional Supervisor, Walter Lazusky, who suggested a “*Panfish Derby*” and a filleting demonstration. During this discussion, a fish fry and preparation of the catch was introduced into the proposed event.

Somehow, I was elected to contact the sportsmen of the area to get their opinions on holding an event. One problem was that two counties, McKean and Warren, were involved. I contacted fellow Officer Wilbur Williams of McKean County and with his assistance we coordinated the activities.

The next step was contacting the various federal agencies who would be involved: the Bureau of Sports Fisheries, US Corp of Army Engineers and the US Forest Service, who, I must say, gave their utmost cooperation and assistance.

The "Cookout" which was to follow the Kinzua Panfish Derby was going to consume a great many fish but donors like Mr. & Mrs. Ray Abbot, left, and Kevin Thompson, right, did their part!

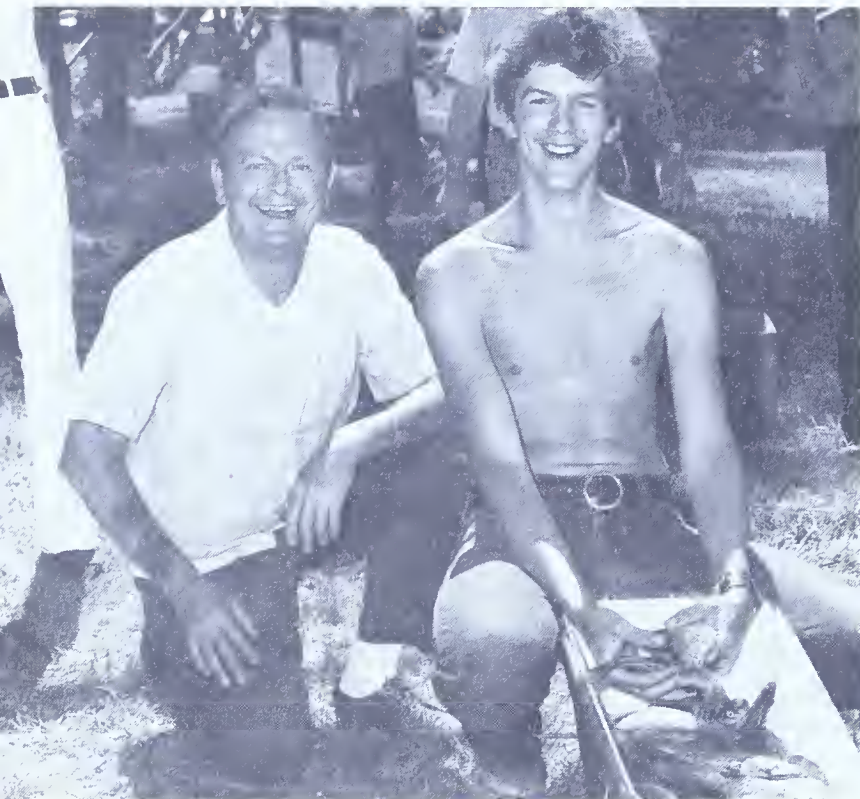


After several meetings with sportsmen of the two counties, it seemed like everyone climbed on the band wagon! The Seneca Highlands Tourist Association and Kinzua Dam Vacation Bureau agreed to handle the publicity.

Nearly every sporting goods dealer and store in McKean and Warren Counties began contributing to the various sportsmens clubs. These prizes were not to be for the largest fish, but to each fisherman who caught fish and would bring them to the headquarters at Kiasutha Beach on the Kinzua Arm of the reservoir.

June 5th was selected as the day for the event. The Fish Commission contributed the chefs and filleting expertise. Many fishermen contributed their catches which amounted to over 50lbs of fillets and the nearly 700 persons who attended had a taste of the golden brown morsels which were dipped in egg batter, rolled in "Golden Dip," and deep fried. The Kinzua Panfish Derby and fish fry was a success and will become an annual event. Due to the response this year and in anticipation of a much larger crowd next year the 1977 Derby will be held at Kinzua Beach. I am not sure who the first individual was who suggested promoting panfishing, but it wasn't water wasted over the dam. The next "Family Fun Day," or Derby will be bigger and better thanks to everyone that made this past year's Derby a success.

(Editor's Note: Kinzua abounds in panfish and perch are the grandest ice fishing attraction found anywhere. Wait for next year's Derby, if you must, but if you have the chance, get out on the ice as soon as it's safe and take home a peck of perch fillets!)



That cooler of panfish, upper left, is reason enough to make those anglers smile! In addition to the fishing fun, many attending the Panfish Derby shared in the prizes doled out by those McKean County beauties, left. Catching the fish was but a part of the activity. In the photo, lower left, Assistant Supervisor Cloyd Hollen (back to the camera) begins filleting under the watchful eye of Waterways Patrolman Sowers, to his left, who soon joined in, above. McKean County's Waterways Patrolman Wilbur Williams below, tends the "kitchen" as Miss McKean County watches.





Finding a comfortable spot in the shade, the trio above sampled some "finger-lickin' good" fried panfish, while others like the unidentified young lady, right, just kept on fishing! We know that's no "panfish" below, but that Jamestown, N. Y. angler wasn't about to toss back that 23-inch brown trout that didn't go by the rule book! Marie and Kathy Eckle, below right, join Mom in sampling fresh fried panfish on Kinzua's shore. The Panfish Derby made many folks aware of the fine sport fishing for them can be. Too, there were many who never realized that fish could taste that good. Another benefit was realized by the heavy harvest. Panfish which are not harvested in good numbers can quickly overpopulate even the largest of Pennsylvania's lakes, rivers, & streams.



Fishing in Pennsylvania a way of life, both then and now

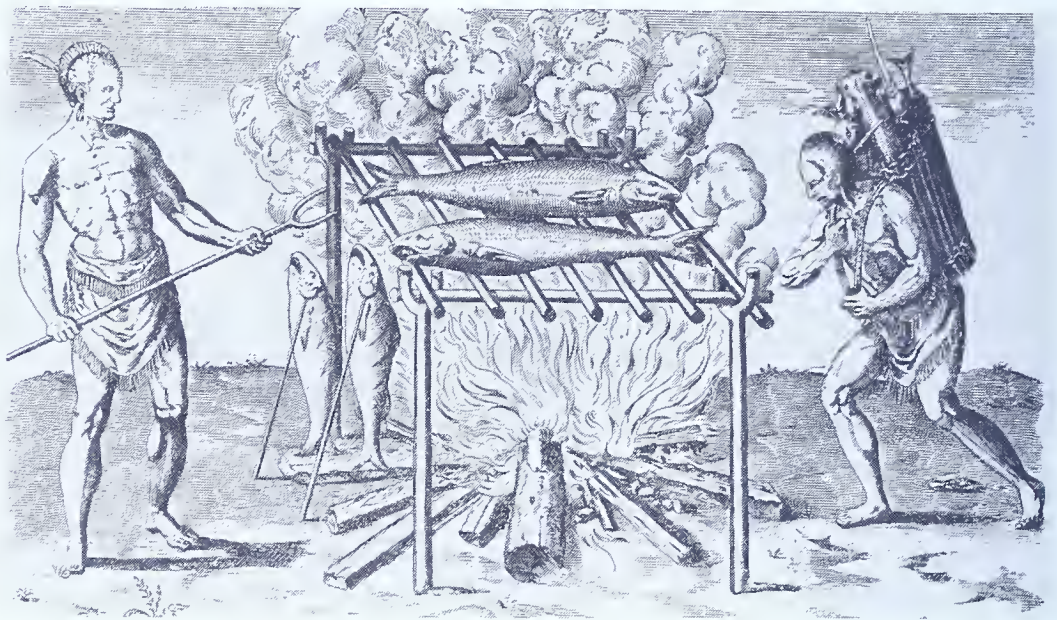
As "THE YEAR OF THE BICENTENNIAL" draws to a close, we in fisheries join the rest of the nation in reflecting upon our heritage. For our purposes we'll narrow it down to the Keystone State's fishery and how it affected and influenced the daily lives of our earliest residents.

Although the Pennsylvania Fish Commission came into being a full decade before our nation celebrated its first hundred years of independence, fishing was in no small way a vital factor in the nation's development. Indeed, history records that the difference between feast and famine many times depended upon the availability of fish — a staple in the diets of not only the early settlers, but those *original* Americans we came to call, somewhat inaccurately, "Indians."

Down through its more than 110-year history the Pennsylvania Fish Commission, known at divers intervals as "The Board," or, "The Department," has been actively engaged in the protection of the state's fishery. From the yellowed pages of early "*Reports of the Board of Fish Commissioners*" we have excerpted, for your reflection, some of the more poignant highlights recorded by our predecessors. We have photographed early plates from these same volumes for reproduction here to give many of our readers their first glimpse of what it was like . . . then.

FROM THE REPORT OF 1892-93-94:

" . . . Less than three hundred years ago the rivers and streams within the confines of what is now the State of Pennsylvania were fairly alive with fish. Shad, herring and other migratory fishes annually ascended the Susquehanna and Delaware Rivers and their tributaries in such vast multitudes that, according to one old writer, the still waters seemed to fill with eddies, while the shallows were beaten into foam by them in their struggles to reach the spawning grounds.



" . . . At that time, the Indians, of what is now Pennsylvania, throughout its whole extent, and indeed, for some distance north, west, and south depended almost wholly on the fish supply for food. These people could with much truth be called fish-eaters. Proof of this is found in every ancient Indian village site, where the ashes and charcoal of primeval camp fires have preserved bones of animal food devoured by the redskinned hunters. In every case, no matter whether the village was located beside a large water course or at some distance from it, bones of fishes have been found among the camp fire ashes. Bones of deer, elk and bear, the principal animal food of the Indians, are also discovered in great quantity, but insignificantly so when compared with the number of fish bones found."

One of the earliest writers quoted in the early reports of "The Board" was one referred to only as "Harriot, a writer in 1585. . . ." We quote his description of Pennsylvania's early fishermen in the language of his day.

" . . . They haue likewise a notable way to catche fishe in their Rivers, for whereas they lacke both yron and steele, they fasten vnto their Reedes or longe Rodds the hollow taylor of a certain fishe like to

a sea crabb, in steede of a poynte, wherewith by nighte or day the stricke fishes and take them off into theire boates. They also know how to vse the prickles and pricks of other fishes. They also make weares, with settinge opp reedes or twigs in the water, which they soe plant one with another that they growe still narrower and narrower, as appeareth by this figure. Ther was neuer seene among vs soe cunninge a wa to take fish withall, whereof sondrie sorts as they fownde in their rivers vnlike vnto ours, which are also of a verie good taste.

"Doubtless yt is a pleasant sighte to see the people, sometimes wading, and goinge sometymes sailinge in those Rivers, which are shallowe and not deepe, free from all care of heaping opp Riches for their posterite, content with their state, and liuing frendlye together of those things which god of his bountye hath giuen vnto them, yet without giving hym any thanks according to his desarte.

"So sauage is this people and depriued of the true knowledge of god. For they haue none other than is mentioned before in this worke." (Harriot also described how the Indians cooked their fish)

"After they haue taken store of fishe, they gett them vnto a place fitt to dress yt. Ther they sticke vpp in

the grownde 4 stakes in a square roome and lay 4 potes vpon them and others ouer thwart the same, the same like vnto an hurdle of sufficient heighte, and laying the same, not after the manner of the people of Florida, which do not schorte (schorche) and harden their meate in the smoke only to Reserue the same during all the winter. For this people, reseruinge nothinge for store, thei do broile, and spend away all att once, and when they haue further neede they roste or seethe fresh, as we shall see hereafter. And when as the hurdle can not holde all the fishes, they hange the Reste by the fyrres on sticks sett vpp in the grounde a gainste the fyres, and than they finishe the reste of their cookerye. They take good heede that they bee not burnt. When the first are broyled they lay others on that weare newlye brought, continuing the dressinge of their meate in this sorte vntil they thincke they haue sufficient."

How sad, but true, that the most frequently occurring reference throughout the writings of historians down through the years was to the American Shad whose appearance in Pennsylvania now is limited to the Delaware and Schuylkill Rivers. Once the most abundant fish found in Pennsylvania's flowing waters, both mighty and small, their annual spawning runs centuries ago brought new hope each spring. The lean table fare provided by the severity of winter was supplanted by the arrival of fresh shad. Additionally, the shad were both salted and smoked to provide meat long after the run ceased.

The white man adopted the red man's fishing methods. Going a step beyond, he built weirs (much to the consternation of men who used the river for purposes of transportation!), placed fish baskets, fish "pots," and the like, to capture as many of the migrating fishes as possible. The latter practices limited the rivers' bounty to a choice few — but not for long! "Vigilantes," we'd call them today, descended upon these structures with a vengeance, destroying them as fast as they could be rebuilt. Their owners, however, defended them with equal vigor and many violent confrontations are

recorded in the early writings.

On the Commonwealth's larger waterways, like the Susquehanna (including the Juniata, its tributary) and the Delaware and Schuylkill, innumerable fisheries were established and the spring catch of shad was shared with those far removed from the waterway — for a price, of course, but more than riverside residents benefitted from the abundance of food available each year. Some fish were even iced in cheap barrels and shipped by railroad to the famous Fulton Street markets of New York.

In time, the white man found other uses for these rivers: they were a water supply for our earliest industries — tanneries and sawmills whose wastes were the first to befoul those once clear waters. Impoundments were created for myriad uses . . . the first, probably, to supply waterpower for mills of every description. The larger, cross-river dams, built to maintain water levels in Pennsylvania's new canal system had the most profound impact on the state's fisheries of the day. The first on the Susquehanna to constitute an absolute barricade to further upstream migration of the shad was the infamous Columbia Dam built at Columbia in 1835. A great cry went up from fishermen all the way up the river. Prior to its construction shad were known to have ascended the Susquehanna all the way to Binghamton, New York.

Numerous fishways were attempted, the "Rogers Fishway" the most heralded; but, the technology of the day limited both the effective-

ness and the longevity of these fish passages. The dam was breached on many occasions by high water and heavy ice floes and each new break was cheered by upstream fishermen because the shad could once again ascend the river. The final break appears to have occurred in 1895 and, with the era of the canals coming to a close, it was not rebuilt. Shad migrations continued unchecked as far upstream as the Clarks Ferry Dam upstream from Harrisburg — until the Holtwood Dam was completed in 1910.

The Conowingo Dam, about 13 miles below Holtwood, completed in 1928, signalled the end of shad runs into Pennsylvania on the Susquehanna.

And so it is that except for a limited commercial fishery on Lake Erie, Pennsylvania's anglers now fish for pleasure. Although they are equally enjoyable on the table, too, our very existence doesn't depend upon either our expertise or our diligence in their pursuit. The members of the early Board were not insensitive to the exploitation of our waterways . . . nor to the desires of the citizenry for a sport fishery. Their efforts are recorded on these pages. Read on. Some of the fishery activities of today, oft-times considered "firsts," fish culture, law enforcement, pollution fighting, etc., would seem to reaffirm the wisdom of Solomon:

" . . . there is no new thing under the sun."

Well, not completely new!

Jim Yoder, Editor



A CHRONOLOGY:

Activities of the Pennsylvania Fish Commission

*compiled by
Lois Howard
Office of Information*

1866 A Convention, held in Harrisburg to investigate pollution, bad conditions existing in mountain lakes and streams, and the stopping of spring shad runs by dams, resulted in Governor Andrew G. Curtin signing the law which named James J. Worall as Pennsylvania's first Commissioner of Fisheries.

1867 The first fishway constructed at the Columbia Dam on the Susquehanna River.

1868 Legislature passed a law prohibiting the use of seines for taking fish within 200 yards of any device erected for the passage of fish.

1870 Thad Norris, a private citizen, purchased 450 bass taken from the Potomac River at Harpers Ferry and released them in the Delaware River on October 26th, just below the Lehigh River Dam at Easton. Shortly after, residents along the Susquehanna and Schuylkill Rivers did likewise with their waterways.

1873 An Act, signed into law April 29, 1873, established a Fish Commission of three persons.

The Marietta Hatchery, Pennsylvania's first, was established on Hoover's Spring — one of the famous Donegal Springs. John P. Creveling, first superintendent. 2,700,000 young shad hatched and planted in the Susquehanna River.

2,044 bass taken from Delaware River and stocked in other waters of the Commonwealth.

1875 Legislature appropriated \$2,000 to purchase 9 acres in Corry and \$3,000 for its immediate improvement in order to construct the "Western Hatchery."

1876 Calico Bass planted in the Susquehanna River near Harrisburg.

1878 Act of June 3, 1878 forbade fishing on Sunday.

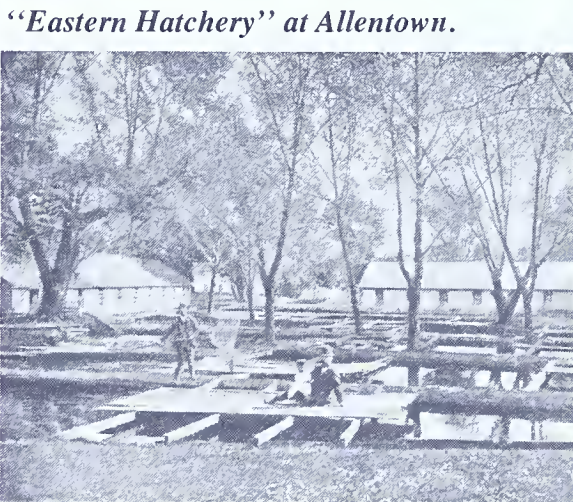
1879 United States Fish Commission distributed 12,000 carp to individuals in 25 states, including Pennsylvania.



The "Western Station" at Corry.



"Rogers Fishway" on the Delaware.



"Eastern Hatchery" at Allentown.

Commission enlarged by three additional members.

1883 The "Eastern Station" built on leased property (Troxell) on the Little Lehigh River.

1884 The "Rogers" fish ladder was erected at the Columbia Dam on the Susquehanna River.

1885 A \$5,000 legislative appropriation established a hatchery in Erie which went into operation on December 12th.

1886 First brown trout eggs — 10,000, received directly from Germany — hatched at the Corry Hatchery.

1888 First recorded planting of rainbow trout in the Susquehanna River.

1893 Legislative appropriation enabled the establishing of the shad propagation station at Bristol.



Conneaut Lake "muscallonge" angler.

The Bellefonte Fish Hatchery, 1903.



1895 Fish Commission abandoned the cultivation of German Carp and attempted to raise black bass.

1897 Commission purchased railroad car to transport fish.

1901 Legislature passed a bill designating certain species of fish in either of two classes: game or food.

1903 Bellefonte Hatchery opened on October 9th. J. P. Creveling named superintendent.

Citizens of Bellefonte raised \$3,500 for hatchery land and railroad siding to the grounds. Property turned over to the department on August 9th.

October 16th: deeds turned over to the department for the Pleasant Mount Hatchery grounds.

Pennsylvania pioneered in the propaga-



The "Susquehanna," Fish Commission's railroad car used to transport fish.

◀ Erie Hatchery in the early 1900's.



Spruce Creek Hatchery, Huntingdon Co. ▼



Interior of the Erie Fish Hatchery.



The Commission's "Commodore Perry."



tion of frogs.

1904 90,900 frogs distributed.

10,200,600 chain pickerel propagated — a first — pickerel had never been propagated in any fish cultural establishment in the United States previously.

Yellow perch propagation begun.

1905 Citizens of Crawford County made a gift of the Crawford Hatchery, located about a mile from Conneaut Lake to the Commission. Union City Hatchery completed November 27th.

1906 Spruce Creek Hatchery, Huntingdon County, started in June.

Smelt hatched at Torresdale Hatchery planted in Bigelow Lake.

1907 The "Commodore Perry," a 70-foot stream tug built for the department's use on Lake Erie.

Experiments begun on the artificial propagation of freshwater pearl mussels. 80,000 coho fingerlings planted in the Lackawaxen and Equinunk. Two were taken by hook and line in the Lackawaxen in July.

1909 Law passed forbidding the emptying into any waters of the Commonwealth any waste deleterious to fish.

1910 Holtwood Dam built on Susquehanna River by Pennsylvania Water & Power Co., forming Lake Aldred.

1911 September 1st: Crawford Hatchery abandoned.

1912 500,000 "muscallonge" eggs hatched at Union City . . . first to be planted in the waters of the state.

1913 Spruce Creek Hatchery sold. "Commodore Perry" proved a valuable

aid in raising Perry's flagship, the Niagara, from Misery Bay.

1914 New hatchery erected on Erie filter plant grounds.

1915 Fish wardens and deputy fish wardens given power to make arrests by Act of April 21, 1915.

1917 Electric lights first installed at Commission hatcheries.

New motor truck purchased for the Erie Hatchery.

1919 Act of July 8th (effective that date) required that nonresidents buy a \$5.00 fishing license. Only 50 were sold that year.

1921 Act of May 16, 1921, P.L. 559, known as the "Resident Fish License Law," was passed.

1922 First resident fishing licenses came into being. Cost: \$1.00. For the first time the Commission became self-supporting; \$207,425.53 was the first year's income from licenses sold to all citizens over 21 years of age.

1923 Legislature reduced fishing license age limit to 18 years of age. The first license button issued January 1, 1923.

1924 Stream survey started to classify waters with regard to area, depth, fish species, aquatic life and general conditions.

1925 A site was purchased in Bedford County to be known as the Reynoldsdale Hatchery.

Creel limits were: trout - 25, bass - 10, walleyes - 10, pickerel - 15, and muscallonge - 3.

(During the 1924-26 biennium the fishing license age limit was reduced to 16 years of age.)

1926 Nonresident fishing license fees were made reciprocal but in no instance less than \$2.50.

1927 New license button made with a device on the back for carrying the license, together with an approved pin.

1928 August 1st: Lake Wallenpaupack opened to public fishing.

Bureau of Research established.

Commission stocked the lake created by the Conowingo Dam.

Resident fishing license fee increased to \$1.50.

1929 Tionesta Hatchery completed.

1930 Most severe drought ever experienced during summer of this year. Many tributary streams dried up entirely.

1931 Commission stopped sending out fish upon application; all fish now stocked by Commission personnel.

December: First issue of Pennsylvania Angler published — subscription price:

50¢ per year.

Act of May 28th, effective July 1st, required a license for motorboats operated on inland waters. Enforcement of law placed with Fish Commission.

1932 Safe Harbor Water Power Corporation created Lake Clarke with the Safe Harbor Dam.

September: land purchased for Huntsdale Hatchery.

For the first time, Commission distributed more than 1,000,000 legal-sized trout.

1933 Creel limit of trout reduced to 20.

1934 "Fisherman's Paradise" created. Visitors in the first year totaled 2,952.

1935 First tourist license (three days - fee \$1.50) became available for nonresidents. Same bill also provided a 12-year age limit for nonresidents.

1936 Flood waters washed away a great number of trout and destroyed many rearing pools. Fishermen still able to enjoy fairly successful trout and bass fishing.

1937 House Bill No. 6 made Sunday fishing lawful.

Pymatuning Lake opened to public fishing July 1st.

1938 Commission produced its own brown and rainbow trout eggs for the first time in history.

1939 Senate Bill 160, effective September 1st, permitted the purchase of land and waters by the Fish Commission.

1940 Yellow perch raised to fingerling size for the first time.

1941 Bass stocked in lakes for the first time.

Law prohibiting the sale of fish bait or bait fish taken from inland waters became effective October 1st.

1942 Blue pike catch in Lake Erie up 400% over 1941.

1943 Act No. 145 provided free fishing licenses for servicemen.

1944 Commission purchased Trexler Fish Hatchery in Allentown.

1945 Legal size of muskellunge increased from 22 to 24 inches.

1946 Fisheries management program begun with mobile biological laboratory.

1947 Act 81 provided free fishing licenses for certain disabled veterans.

Stream management program started.

1950 Fisherman's Paradise set new all-time record attendance for one year: 34,796.

1951 Fish were placed in the Schuylkill River for the first time in a decade after a cleanup campaign by the Dept. of Forest & Waters.



Galeton, in Potter County, boasted an early day fishway on Pine Creek.



Fishway on Juniata, Warrior's Ridge.

Early day anglers on Crystal Lake.



Catch from Lake Henry, Wayne County.

Fishing on Lake Carey, Wyoming Co.



Act. No. 68 directed the Fish Commission to make a study of the migratory habits of fish, particularly shad.

Legal size of pickerel increased from 12 inches to 15 inches.

Commission acquired Benner Spring Research Station property.

1952 Size limit removed on crappies.

1953 July 11th, Virgin Run Lake, formally dedicated. First Federal Aid Project of the Commission under the Dingell-Johnson Act and the first lake to be built from start to finish by the Commission.

Pymatuning Lake first stocked with muskellunge.

1954 Fishing license fee increased from \$2.00 to \$2.50.

Size and creel limits removed on panfish and food fishes.

1955 Ground broken for construction of Lake Somerset on August 17th.

1956 Taking of carp with long bow and arrow legalized.

Commission established uniform Fly-Fishing-Only regulations for all projects. Pellet feeding of trout initiated at hatcheries.

1957 Trout season extended to October 31st in selected lakes.

Act 330 increased fishing licenses to \$3.25 with \$1.00 now earmarked for acquisition and development.

Act 155 gave Commission right to accept donations.

Act 121 gave wardens right to arrest persons for littering.

Benner Spring Research Station placed in full operation.

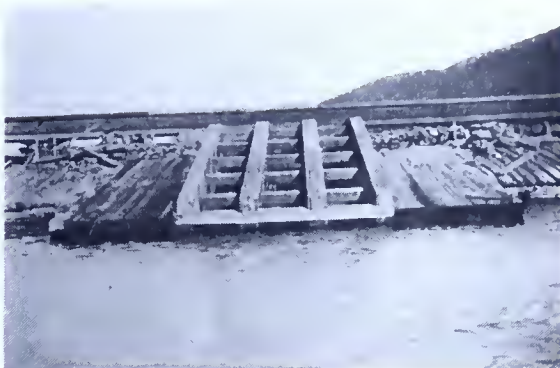


Drying nets on reels, Lake Erie.

Commercial fishing boats at Erie.



Steamboat and rowboats line the shores of Eaglesmere Lake, Sullivan Co.



Susquehanna fishway, Clarks Ferry.

Conneaut Lake in the late 1800's.



1958 First Fish-For-Fun area established on Left Branch of Young Woman's Creek in Clinton County.

Bell and Holmes hired to make Susquehanna Fishway Study.

Kokanee eggs procured from Montana, hatched at Pleasant Mount and stocked as fry and fingerling on an experimental basis in 8 lakes.

1959 New work and patrol boat "Perca," launched at Lake Erie.

Act No. 673 signed by Governor David L. Lawrence on December 15, 1959 -

Eliminated the license button . . .

Permitted aliens to purchase a nonresident license . . .

Made nonresident fishing license fee a flat \$7.50 (formerly it was reciprocal).

First "wired stocking area" installed on

South Branch of Kinzua Creek, McKean County.

1960 Aliens permitted to purchase fishing license for \$7.50.

1961 More than 116,280 fish were killed in the Susquehanna River during October. Commission accepted a \$45,000 voluntary contribution from the Glen Alden Mining Corporation — the largest settlement to date for fish killed by pollution ever to be made in the United States. Largest shad migration of modern times recorded on Delaware River. Belmont Lake, in Wayne County, opened on June 17th.

Act No. 474 eliminated the metal motor boat license tags.

1962 Federal-State cooperative trout stocking program became effective.

Fisherman's Paradise opened April 14th on a "Fish-For-Fun" basis.

1963 Last year that nonresident trout stamps were required.

1964 Act 400 approved the numbering system for boats — effective February 1st.

Resident fishing license fee increased to \$5.00.

1966 100th anniversary of the Commission observed.

25,000 coho salmon stocked in Harveys Lake, August 10th.

1967 Albino brook trout stocked for the first time.

Palomino trout stocked for the first time.

1968 Oswayo Hatchery, in Potter County, purchased.

First fall run of coho "jack" salmon, from fingerlings planted in the spring return to Erie's tributary streams.

1969 Senate Bill 10 - Liquid Fuels Tax Bill signed by Governor Shafer.

Commission received Amur Pike eggs from Soviet Union.

1970 Brook trout named official state fish, March 9, 1970, Act 61.

Construction begun on Big Spring Hatchery, Cumberland County.

1971 Chinook salmon smolts released in Lake Erie.

1972 Commission names 75 streams in "Wilderness Trout Program."

During Hurricane Agnes, Fish Commission personnel, using patrol boats aided stricken residents throughout the Commonwealth and received special citations from Governor Milton J. Shapp.

1973 Resident fishing license fee increased to \$7.50.

1974 Bog turtle protected by HB 1248.

New littering law signed by Governor Shapp on March 22nd.

Use of electric motors authorized on all Commission lakes.

HB 2538 gives Commission jurisdiction over reptiles, amphibians, and aquatic organism's.

1975 First strike by Commonwealth employees.

Record number of miles of stocked trout waters stocked: 5,042.8.

Trout season extended (to October 31st) on "all approved trout waters" for the first time.

1976 Commission began trout stream inventory.

World record Amur Pike (caught by hook and line) taken from Glendale Lake, Cambria County.

Commission adopted new regulations for organized snake hunts.

Blue Dun for Everyone

by George W. Harvey

Ever since Dame Juliana Berners popularized fly tying as an art during the fifteenth century, the most sought after hackle has been the "Blue Dun." It is not known for sure where the first blue dun hackle came from, but chances are pretty good that one now and then showed up in the Asiatic capes that were imported to England.

In eighteen hundred eighty three, the Englishman, Dr. Cutcliffe, wrote about the "Old English Game Fowl" and stated that the hackle from these birds was superior to all other hackle. Actually, this was not true. This bird was developed from a cross between a black rooster and a white hen. By today's standard the quality of the hackle from the English Game Fowl is questionable.

When dry fly fishing became popular in the United States during the late eighteen hundreds and early nineteen hundreds, American fly tyers began raising and crossing chickens for blue dun hackle. They were more conscious of hackle quality than their English counterparts and succeeded in raising a small percentage of birds with super quality hackle. The problem with these early breeders was that they had no knowledge, or a very *limited* knowledge of genetics.

Haphazard mating or line breeding will produce a few quality birds. However, one must be a poultry geneticist who understands how to mate birds scientifically to acquire stability in color and hackle quality.

Super quality is rare regardless of color and in the past most of it came from Asiatic birds.

A super hackle is one that is long and narrow from tip to butt end with an abundance of short, stiff, glossy fibers that have a minimum amount of web, with a midrib, or quill, that is strong and flexible enough to be easily wound on a hook.

It was, and still is the belief of



A flock of young birds being raised at the Metz hatchery for Blue Dun stock.

most tyers that to acquire this super hackle the birds must range in the open and be at least several years old. Today this is no longer true, because when one knows how to scientifically breed, feed and handle chickens properly one can produce super hackle from pen-raised birds the first time the cock birds reach maturity. In fact the best quality hackle will be produced the first time the hackle "hardens off." Cock birds held over for several years may develop a poor quality hackle and the midrib may become enlarged and stiff with age. When this happens it is very difficult to wind on the hackle and produce a top quality fly.

In almost the geographical center of Pennsylvania is the beautiful Kishacoquillas Valley. Most of the people farming in this limestone valley are Amish, a hard working and frugal sect. The only sizeable community in the upper valley is the rural borough of Belleville.

Few people (even in Pennsylvania) have ever heard of this small community, but it is fast becoming known internationally by all fly tyers as the home of the Metz Hatchery where the best hackle in the world is raised. Yearly, Metz Hatchery raises approximately twelve million

day old chicks for the commercial trade. This may seem like a lot of chicks to the average individual, but the hatchery is capable of producing many times this number. They have been breeding for meat production for thirty-six years and have produced a strain that is one of the best in the United States.

Since "Bucky" Metz is an avid trout fisherman and an excellent fly tyer it was only natural, with the facilities available, that he would raise chickens that produced quality hackle for his own use. He has been doing this for quite a few years.

Some years ago Bucky received a setting of eggs from a friend who raised the best quality blue dun birds in the United States. The chicks that were hatched from this setting was the start of the Metz Blue Dun strain. It usually takes many years to improve any strain genetically and one who works with only a few birds is severely handicapped. Buck realized this and raised thousands of birds. Only selected birds from this great number were used for his breeders. Hundreds of long, tedious hours were spent in selecting and tagging the best birds for mating. At present he has approximately fifty different families of birds that he is

Shown below is a comparison between an Asiatic cape, left, and one of the new Metz "super" capes on the right.



working with. This was no easy task for even a trained man in the field, because many unexpected problems cropped up that were never experienced by the small operators. Almost anyone else would have been discouraged and quit but Buck was so determined to produce a super quality hackle that he suffered through the disappointments until he solved most of the problems. Now, for the first time in the history of fly tying the demand for Blue Dun hackle can be satisfied, because the number of birds that can be raised is unlimited.

Equally as important as the Blue Dun hackle is the fact that the Metz Hatchery raised cock birds that produce super quality hackle in the following colors: black, cream, furnace, light to dark ginger, grizzly (several shades), and white. Over ninety-five percent of all flies tied commercially are tied from these colors. All necks are heavily hackled with a range of hackle from size eight and larger, to size twenty eight. The most remarkable characteristic of the hackle is the length from tip to butt end and the fact that they are practically web free. One hackle, in most cases, will suffice for the average fly. From most Asiatic or



Above: Buck Metz with a light ginger hackled bird developed from his Blue Dun stock.

imported necks one can tie on the average about five dozen flies from size twelve to size sixteen and many necks will not hackle even three dozen dry flies. It usually takes two or three hackles for a well dressed fly because of the short length (tip to butt end) and width of the hackle fibers.

I have personally tied up to twelve dozen dry flies from a Metz cape using two hackles for each fly. Not all capes will produce this many but all will outproduce the best Asiatic necks I have ever come in contact with, and this amounts to thousands of capes. The fly tyer who prefers a normal or lightly dressed dry fly will tie about twice as many as I do from the average cape. Quality dry flies now sell from ten to twelve dollars per dozen. When the number of flies that can be tied from one cape is considered, the cost of a super neck becomes infinitesimal.

It takes approximately nine months to raise a cock bird to maturity. Just as soon as the bird reaches the stage where all hackle on the cape "hardens off" the birds are killed and the cape removed along with the saddle and shoulder or spade hackle. The saddle hackle from most birds can be used for ty-

ing larger dry and streamer flies. The spade hackle is equal to if not better than the throat hackle for tails on dry flies.

Cut wings are now becoming quite popular in the United States and the various shades of blue dun body feathers are in demand by the discriminating fly tyer. As a result all the body feathers except the tail are being used from the blue dun birds.

Many tyers have wondered why blue dun and other super quality was not raised in the past commercially in the United States. There are a number of reasons such as expense, facilities and most important, "know-how."

Buck Metz earned his B.S. and M.S. degrees from Cornell University. While there he studied Poultry Husbandry. He is a self-educated geneticist and probably knows more about breeding birds genetically for color and hackle quality than anyone in the United States. He keeps abreast of his field by taking short courses and attending workshops at the Pennsylvania State University on the latest developments in Poultry Science and consults with the leading geneticists in the field. In addition the hatchery hires the services of one of the leading poultry geneticists in the United States.

In the short span of years the hatchery has been in the hackle business they have produced more quality hackle than anyone in the world. This was only accomplished by keeping exacting pedigree records, using the latest management technique, and by scientifically developing feeds that helped improve hackle quality. Everyone who sees a cape for the first time stares in utter amazement at the color and hackle quality. The fly tyer who has never tied a dry fly with hackle from one of these super capes surely has a surprise coming. When you see their trademark on the back of a cape you are assured the hackle is "super."

It seems only fitting that a Pennsylvanian should solve the acute hackle problem, since fly tying in the United States was pioneered in Pennsylvania and first promoted by the *Pennsylvania Angler* during the early fifties.



Did You Ever Hear A Fish Coughing?

by Dean Owen

Well I did . . . at least, I heard of some that did. And the next time you lose a lure, if you play your cards right I can tell you there's an outside chance you may be able to make him "cough it up!"

Yessir, folks, Robert A. Drummond, an aquatic biologist at the Environmental Protection Agency's National Water Quality Laboratory at Duluth, Minnesota, has been in charge of a "fish coughing" project since 1971, and he should know what he's talking about.

To my surprise, I learned that most fish do cough . . . some more than others. For instance, although not specifically mentioned, I imagine a smoked salmon could be expected to cough a lot more than a fish who didn't smoke at all.

Coughing, Drummond tells me, is a normal throat clearing process which removes debris that would otherwise interfere with normal breathing, just as with humans. It may even be the primary cause of recently reported cases of fish snoring in the Walker Lake region of Nevada, although Drummond, who is a bit conservative, didn't actually say so.

The study got underway in 1971 to compile basic data on the effect of water pollutants on freshwater fish.

Mechanics of the study are rather simple. In effect, test fish and control fish are placed in individual aquariums, called electrode chambers, where they are given a type of polygraph test. The apparatus used is similar to those used as lie detectors, or for monitoring heart and brain damage in our hospitals. In this application, the instrument measures the number of times the fish coughs per minute, and results are recorded for fish cavorting in uncontaminated water, and for those swimming around in the same water, except for measured introductions of specific contaminants having been made.

The studied fish are monitored for at least 24 hours before each new pollutant is added, then for a number of days afterward.

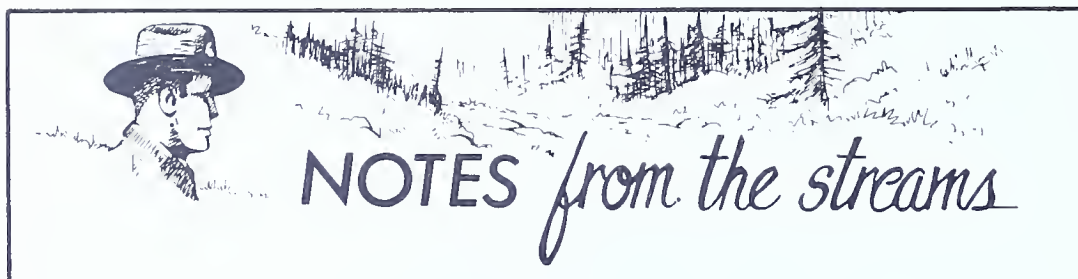
Strangely enough, Drummond says, an unexpected spinoff of the present study may be a means of using these finny food tasters to monitor the quality of lakes and streams in which they live. In tests with copper and mercury, it's been found that the concentrations of pollutants which increase the fish's cough frequency significantly, approximate the same levels previously found in related long-term studies to be damaging to fish growth and sex life.

So, in other words, a sudden increase in coughing fits among test fish could conceivably be used to trigger an immediate alarm to major industrial plants using a given body of water to discharge effluents, warning them that potentially damaging waste is leaving the plant. Plant personnel could then take immediate corrective action.

Although the study group doesn't know yet whether all or only some species of fish cough, Drummond says they do know bluegill sunfish, fathead minnows, and all species of trout and salmon do.

"Currently," he says, "we're looking at the short-term effects of 10 heavy metals and pesticides, and will be comparing the results with already computed long-term effects. If the comparisons are favorable for this group, we feel the cough-frequency test may be valid for other chemicals." (That's the way scientists talk.)

Although Drummond is a dedicated scientist, engaged in serious and beneficial research, he admits his work does have a humorous side to it. "Now, people ask," he groans, with the trace of a wry grin on his face, "why we don't develop a cough medicine to cure the fish we're causing to cough!"



GO BACK!

Mrs. Ronald (Judy) Grogg, of Grogg's Sport Store, Zelienople, told me this one. An elderly man came into the store and said, "I sure would like to know a good place to go fishing!" Judy replied, "Why not go to Hereford Manor Lake?" (Which, by the way, is close by). The gentleman frowned and said, "I was just there and there's a sign on the refreshment stand door that says *Closed for the Season!*"

Donald Parrish
Waterways Patrolman
Beaver County

NOTHING LIKE IT!

Many of Pennsylvania's beautiful natural landmarks are passed by as travelers head for the national natural wonders of the western states. I've often thought that much of our scenery "goes to waste" as folks travel to points so far away. But today I talked with persons from New Jersey, New York, Delaware, Massachusetts, Maryland, and even Missouri that had driven to the Keystone State to enjoy one of the great white-water canoeing streams of the eastern United States: the Lehigh River. At one of the six possible launch sites I checked 105 canoes, kayaks, and rafts in four hours. Many of these folks agreed with me that there is nothing like autumn as seen in Pennsylvania.

Robert Lynn Steiner
Waterways Patrolman
S/Luzerne County

MERCY! THAT SMARTS!

I recently heard an amusing story concerning a snapping turtle hunt. I thought I'd pass it on since the Fish Commission had assumed the control over reptiles and amphibians, and perhaps a lesson can be learned concerning a safety tip when turtle hunting.

A number of years ago, after mucking around during a rainy morning, these two guys finally captured a couple of big snappers. They wanted a picture of these two giants for posterity. So, as one of the men, soaking wet and standing in the rain, stood holding the turtles by their

tails, one in each hand, the other tried to focus his camera for a picture.

As the turtles were still very much alive and kicking, the guy holding them made sure they were as far away from his body as possible. The photographer had trouble getting the man and the turtles in the picture so he kept directing "the three of them" to step back. This kept up until one of the turtles was swung close enough to a stationary object close at hand and grabbed hold as only a snapper can. The "object" happened to be an electric fence wire!

Needless to say, the middle person of the three subjects, acting as a very good electrical ground, reaped the results of the snapper's indiscriminate anger. The result of all this was a flurry of seldom used epithets being tossed about and an overexposed photograph!

Larry R. Baker
Waterways Patrolman
Mifflin/Juniata Counties

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)

FAWN VS FOX

There appears to be no end to strange experiences which are waiting out there for our trout fishermen. One of the most far-out that I've heard in a long time comes from Bill Miller of Rayne Township in Indiana County.

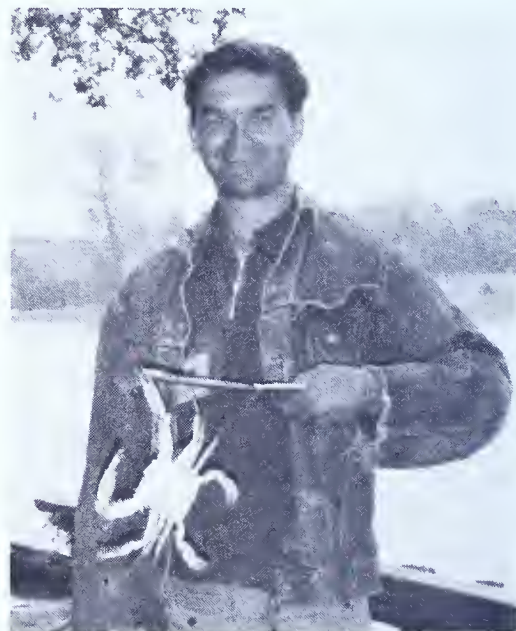
Miller was fishing the special FLY-FISHING-ONLY waters of the Little Mahoning upstream from Rochester Mills late this spring when he was startled by a noise that he had never heard before.

Scrambling and half falling down the steep bank came a tiny fawn, obviously just born, with a red fox half on its back and nipping at its ears. The fox was nearly as big as the deer, for it was full grown, though it seemed to be a young one which had not yet learned all a fox is supposed to know about hunting.

As the strange couple reached the water, Miller was able to frighten the fox

away. Turning from that, he found that the current had swept the tiny fawn some distance downstream already. So he hurried to the rescue, placed the fawn in a comfortable spot on the other shore, and stood guard over it while he fly-fished the morning out.

Bill Betts
Deputy Waterways Patrolman
Indiana County



(photograph by Deputy Fink)

NEWCOMERS —

Mr. Anthony Davis, of Philadelphia caught this nice blue crab in Neshaminy Creek at Grundy's Pier, upstream from the I-95 bridge shown in the background. There have been several reports of others having been caught in the area. Waterways Patrolman Jay Johnston has also had reports of blue crabs being caught in the Neshaminy, Pennypack, and the Delaware River.

Bill Fink
Deputy Waterways Patrolman
Bucks County

A DUCK IN TROUBLE

Right in the middle of the summer, when he knew me to be a little weary of patrolling the Indiana County lakes and streams, my neighbor Don Rodgers proposed an excursion to the new Raystown Dam which had inundated his Huntingdon County boyhood home and which I had never even seen.

Needless to say, we had a great day. But, we also enjoyed an extra dividend in the form of a very touching experience.

It was still early in the morning when we spotted a mother mallard coming round a little promontory with much ado and half a dozen young ones behind. She

disappeared abruptly, but five minutes later reappeared with the same kind of excited quacking. When we investigated, we found that one of the young (it was about half-grown) had swallowed a baited fish hook and was anchored securely to the shore by the line which was all fouled up in the roots of a stump.

We tried in vain to extricate the hook; finally, as a last resort, we cut the line. Quick as winking, the little duck rejoined the flock which had been waiting just a little way off. And it seemed to be doing alright the last we saw of it . . . but we'll always wonder.

There's a message for fishermen in this, I think.

*Bill Brooks
Deputy Waterways Patrolman
Indiana County*

SEAFOOD CHATTER . . .

It is a fact, anglers, that Blue Crabs, large in size and numbers are appearing in the tidal portions of the Delaware River and Neshaminy Creek. However, this officer will not relate the matter again to anyone while on patrol. After telling many fishermen of the crabs, the only replies have been those of disbelief or jest. The last fisherman I told said, "Ha! Ha!, I bet next you'll be telling me there are striped bass in the river! Ha! Ha!"

Well, *there are stripers in the river!* But I just "clammed" up and walked away.

*Jay B. Johnston
Waterways Patrolman
Bucks County*

GET TO KNOW THEM—

During my career as a Waterways Patrolman I have heard of, and witnessed on many occasions, the needless killing of many harmless snakes such as milk snakes, king snakes and water snakes in mistake for copperheads.

The sadness of this useless killing is highlighted by the fact that all snakes including the so-called "harmful" species, diet almost exclusively on only small rodents, including many rats and mice, and insects. They play an important part in nature, but their role in agriculture is even higher.

Just as a farmer dislikes anyone killing his many cats that live around his barns and other outbuildings, he should also discourage the killing of snakes. Along with the cat, the snake takes a big toll on the ubiquitous rat and mouse that can potentially wipe out a farmer's feed supply.

I would not hesitate in getting rid of a poisonous snake found around my home,

but a nonpoisonous snake is safe. I once knew a state park superintendent who lived in a very old stone home. He had a big milk snake that lived in the cellar of the house. The snake was very rarely seen and caused no problems. What was never seen around the house was a rat or mouse. I would urge everyone to leave these beneficial creatures alone when they are encountered. Learn to identify the various species found in our state so that the useless killing of the harmless, nonpoisonous species can be lessened.

*Larry R. Baker
Waterways Patrolman
Mifflin/Juniata Counties*

THE MAN WHO LOVES TO FISH

The world loves the man who loves to fish.

You don't find him in jail, you don't find him in the hospital, and you don't find him dying young.

He is the man who, without flaunting his religion from the housetops, sees God forever in the blue skies, in the forest, in the glimmer of the stars and the rising of the moon . . . in everything that is a part of his beloved streams and rivers.

Fishing is not only a pastime which man has created for himself, it is the greatest character building activity under the sun for human hearts and souls.

It is the man who loves to fish who helps to keep the world at its best, who is the greatest fighter for its beauties and its ideas and all because he has come to realize and understand the great and glorious thrill of that intimate contact with nature which one finds when he has a rod in his hand.

C. M. Graffius

*Donald F. Parrish
Waterways Patrolman
Beaver County*

FINNY FRACAS —

While on patrol of Shawnee Lake, I observed two men fishing from a boat. Richard Pierre of Windber, Pa., hooked and landed a tree limb. Casting again, he hooked what also appeared to be another tree limb. When he had it in beside the boat, it jumped straight into the air, landing in the boat *on top of an open tackle box!* Mr. Pierre hollered, "Jaws," as the tree limb turned out to be a 25½-inch northern pike. Needless to say there was quite a fracas in the boat with the open tackle box and two very surprised fishermen.

*James R. Beatty
Waterways Patrolman
Bedford County*

THREE DISTINCT SPECIES!

At a recent Deputy Waterways Patrolman training meeting, one of the officers present remarked about the opening day of the 1976 trout season in this following manner.

Fishermen campers were observed on the opening day of trout season in three categories: "backpackers," "over-packers," and "six-packers!"

*J. R. Smith
Waterways Patrolman
Armstrong County*

NOT EVEN CLOSE!

During the National Hunting and Fishing Day celebration, District Game Protector George Szilvasi and I were working our consolidated display at the Beaver Valley Mall when a six-year-old boy approached the booth to admire some of the furs George had placed on the table. With a very confident smile on his face, the lad picked up a mink pelt and proudly announced, "This is a musky isn't it?"

*Don Parrish
Waterways Patrolman
Beaver County*



Young Jack Bell, of Kane, was using a jig up in Kinzua when he and that 18½-inch smallmouth connected. It weighed just an ounce over three pounds. That's some fish, Jack!

YOU "WARRANT" BELIEVE IT!

While serving warrants recently, and calling at the residence of a defendant, Deputy Clymer and I were greeted at the door by the defendant's wife. After explaining our purpose to her, she thought a moment and as a last ditch effort to delay my contacting her husband, she asked, "Do you have an appointment to see him?"

*Jay B. Johnston
Waterways Patrolman
Bucks County*

Fly Tying

The Yellow Speck: versatile wet fly

*by Chauncy K. Lively
Photos by the author*



Low water conditions on Dunbar Creek.

The other day I was idly browsing through an old wet fly box and came across a pattern I had all but forgotten, and unjustly so. Individual flies have a way of bringing back memories of personal encounters and the tattered appearance of the little Yellow Speck in my box reminded me of several pleasant experiences I had enjoyed with it early in my fly fishing career. That it is not a resident of my present kit is an oversight I plan to correct forthwith.

The Yellow Speck is a multi-purpose wet fly whose origins are unknown to me and I can only speculate that it is an English pattern. In form it is suggestive of many subaquatic creatures and in appropriate sizes it may represent some of the swimming mayfly nymphs (sans tails), as well as caddis and midge pupae. It was as the latter that I recall several spectacular evenings on the lower water of Fishermen's Paradise, when the trout were boiling during hatches of cream midges. A size #20 Yellow Speck was cast across-current and brought back in short spurts with the fly riding just under the film. Trout responded to the artificial as they did to the naturals, with slashing, sometimes porpoise-like rises that quickened one's heartbeat. Inevitably, several heavy trout broke off on the strike for when a taut 6X tippet pulls a little

fly westward and an eastbound fish intercepts it at full clip, something has to give way. I remember that it was important to make the fly ride as close to the surface as possible because when it sank too deeply it lost its effectiveness. In this kind of situation it often helps to grease the tip of the fly line, as well as all but the last inch or so of the leader.

One of the most unusual experiences I have ever had with a trout fly was with the Yellow Speck in, of all places, a bass lake. We were taking a family vacation at Canadohta Lake and had rented a cottage at the southwest corner of the lake. It was August and the weather was hot and sultry. So long as we were willing to go out after dark, or at daybreak in the morning, our bass bugs produced some good fish. During the heat of the day the bass were down and we spent a lot of time fishing for panfish with ultralight fly rods — all of which is fun, too.

On one of our morning bass-bugging sessions we had reached the upper end of the lake when thunderheads built up in the sky and an ominous rumble told us we should head for home port. When I docked the boat the rain hadn't yet started; so, I decided to make a few casts for bluegills before the storm drove us indoors. The big rod was stowed away and I put up a little Young Midge rod I had recently acquired — a six-footer, weighing 1-5/8

ounces. A Yellow Speck, size #16 I recall, was bent on the leader and I began to cast from the end of the dock toward a weed bed where I knew some above-average panfish liked to stay. The little fly was allowed to sink alongside the weeds, then retrieved in slow, halting strokes. On the second cast the retrieve was scarcely begun when the end of the floating line made a short, dart-like movement, typically signifying the take of a bluegill. But when I raised the little rod, instead of feeling the quick, pulsing throb of a panfish, there was a nearly dead weight, moving slowly away. Then the leader began to lift and, amid a flurry of spray, the shaking head and gaping maw of a huge largemouth bass appeared above the surface. I could scarcely believe my eyes for he was far bigger than any we had caught at night. Against what pressure I could apply with the light gear, he made his way into an opening in the weeds, fouled the leader and was gone.

Of course the incident was a fluke; I'd hate to try to earn a living catching bass on small wet flies. But it does prove that big bass don't *always* require a mouthful. After all, a fat man enjoys an occasional jelly bean (Editor's Note: I know, I know!). And it points up the versatility of the Yellow Speck as a wet fly that suggests a variety of foods to a diversity of insect-eating fish.

Tying the Yellow Speck:

Left: (Range of hook sizes: #14-#22.) Bind yellow tying thread to hook well behind eye and tie in a short strand each of yellow floss and fine gold wire. Wind over floss and wire to bend, then forward to original tie-in. Cut waste ends of floss and wire.

Right: Wind floss to form tapered body and tie off. Trim excess.

Left: Wind gold wire counter-clockwise, as ribbing, and tie off. Cut a strand of fine, yellow chenille about 2" long. Fray one end and tie in at forward end of body.

Right: Make one turn of chenille and tie off. Remove waste end. Then tie in a pale dun or cream hackle with glossy side facing eye. Barbules should be about 1½ times as long as hook gap.

Left: Wind hackle two turns and tie off. Trim off excess hackle tip, whip finish head and apply a drop of head lacquer.

Right: The Yellow Speck is useful in a variety of sizes.

CO-OP NEWS

by Bill Porter

Susquehanna County's Central Conservation Club is unique in several ways: on occasion they have trouble keeping their trout wet and they report no known human vandalism . . . or "troutnapping."

A closer look is in order. According to club president, Gary Parker, the major concern is an adequate water supply. At the time of our visit, there was a 30 gpm flow; however, this rate has been as low as 2 gpm — hardly enough water to do the job.

A number of compensating devices have helped the club through the dry spells. Initially, the raceway is only three feet wide, which helps with the rate of exchange. In addition, the 60-foot unit is stair-stepped every 15 feet with a one-foot drop to each section. This aids in aeration and helps to collect the minimal water supply into at least four rearing or "surviving pools," as the case may be. Finally, there is an acceptable farm pond into which the raceway drains that can hold the trout if needed. Incidentally, this pond is stocked every year and is open to the public with emphasis on a fishing area for youngsters although not officially listed as such.

John Stone, nursery manager, pointed out improvements being made: some in relation to the water problem and others for predator control and appearance factors. Well on the way to completion was the new keyway project. Incorporated into the Cooperative Nursery Program in 1971, the keyways seemed to be the major replacement item needed. New predator screens were under construction as was a dressing up of the intake system. In the latter, attempts were being made to channel a few more drops of water into the holding basin from the myriad, but tiny, springs oozing out of the hillside by constructing flagstone-lined water courses and adding to the cement apron just above the control pipes to the raceway.

Remember someone with a
gift subscription to
the Pennsylvania Angler
(details on page 32)



Photo above shows the club's nursery undergoing major repairs. Farm pond in the background is used on occasion to hold nursery trout for stocking or during periods of low water. Work is yet to be done on intake system, right, to improve water collection and flow.



In any event, the nursery is an attractive, well-kept one situated near the top of a hill overlooking the valley below. The club owns about 82 acres, the nursery being part of this plot. Diversified uses of the remaining acres suggest the club has a variety of interests. There is an extensive pheasant and wild turkey pen; a new hatching house for pheasant and turkey chicks is under construction; a barn has been converted into an attractive meeting area and another smaller outbuilding holds tools, equipment, and a couple of wild turkeys, that indicated a certain amount of aggressive displeasure as John Stone showed them to us.

But, back to the trout. The club produces about 2,000 legal-sized fish a year. The mix at our visiting time, or rather for that stocking season, had been 1500 brooks and 500 rainbows with a few palominos added. Holdover fish, if any, are in the farm pond either by way of normal stocking and simply haven't been caught yet, or as the result of a low water emergency in the raceway.

Other than the limited number normally added to the pond, the bulk of the stocking is done in Wyalusing Creek, the Meshoppen Creek, and the Forest Lake Creek. These are tributaries to larger trout waters and the three are not on the regular Pennsylvania Fish Commission trout water list. According to Parker, the

stocking of these small streams has been done with proper approval and has added about 12 additional miles to trout fishing areas in Susquehanna County.

And from the production of the fish comes the stocking of them. In this instance the Central Conservation Club, as many other clubs in the program, have developed their own hardware. In this case, a 250-gallon fuel oil drum is pressed into service. Attached to it, is a milker pump that provides aeration. The whole unit is set into the bed of the first handy pickup and away go the trout, club members, et al, into the remote areas of Susquehanna County to distribute the product of a year's work.

Both Gary Parker and John Stone are teachers in the local school district. They feel that their contact with the young people helps with the nursery, the club in a total sense, and has contributed to the success of the numerous projects of the outdoor organization. However, they do admit, as we have heard many clubs before, that there are times when a few more hands could be used for a few hours of hard work.

The overall view of the contributions made by the Central Conservation Club are very positive. With additions of 2,000 trout a year, a goodly number of wild turkeys and pheasants, what else can be expected of a public-minded rod and gun club?

Boater's Bulletin Board

by Alan MacKay

NEW LOOK ON THE DELAWARE

We've noticed a few late-season boaters doing a double-take along the Delaware this Fall. No, it's not your imagination; those are Fish Commission insignias over the blue slash on those patrol craft.

On September 7, Act 800, signed into law by Governor Shapp took effect, officially transferring the recreational boating function from the Delaware River Navigation Commission to the Fish Commission for the counties of Philadelphia, Delaware, and Bucks. The patrol boats are the same and you'll see a few familiar faces under those new uniforms as you cruise our tidal waters.

KITE SKIERS GAIN AIR SPACE

Late season action by the Fish Commission resulted in a change in regulations affecting kite skiing. In past years, kite fliers were restricted to perusing their sport in certain areas designated by special regulations. Under the new rule change, kite skiing will be permitted in any area open to *unlimited* water ski activity. Kite skiing will NOT be permitted in any area having special regulations concerning water skiing in general. If there's a doubt about a particular area, contact your local Waterways Patrolman.

The new regulations will be in effect *on a trial basis for a period of one year.*

It is not expected that the skys above our waterways will suddenly be filled with bright colored canvas, for two reasons: according to the experts, the total population of Pennsylvanians engaged in this sport number less than 50; and secondly, because the new regs limit the number of flyers in the air to two in any one place at any one time.

An additional section has been added to the new regulations that affect *all* skiers, waterborne and air-borne. Entitled *Skier Responsibility*, it reads: "No skier, including a kite

skier, shall operate or manipulate one's skis, kite, aquaplane or similar device in such a way as to cause the device, or any person thereon, to collide with or strike against any object or person, or in any way cause damage or injury to said person or object." For kite skiers this translates simply: if you fall out of the sky and land on somebody, IT'S YOUR FAULT!

DISTRESS SIGNALS SAVE THREE LIVES

Three Pittsburgh area sailors owe their lives today to the fact that they carried aboard and knew how to use their visual distress signals.

The three men, sailing a 16-foot boat from Ontario to Erie encountered trouble offshore from the town of North East, Pa., when their rudder broke and the small craft capsized.

As darkness was settling in quickly, the trio faced the prospect of a long, cold night in the water. Fortunately a flare pistol was included among the safety equipment aboard and was stowed so as to be accessible. Their flares were seen by a lake front resident from a distance of a mile-and-a-half and the Coast Guard was immediately notified.

Within 40 minutes from the initial sighting of the distress signals an Erie County Air Rescue chopper had spotted the vessel and stood by overhead, guiding the Coast Guard's rescue ship to the scene.

When reached, the three, all wearing life jackets, were in the water attempting to right the overturned craft. They were returned to shore, wet and hungry, but otherwise uninjured.

This incident illustrates the great value in being prepared in advance for an unexpected emergency. Visual distress signals are not required equipment that must be carried aboard, but the added precaution averted what could have become a tragedy.

BUOYANT CUSHIONS SAVE THREE

Take one small flat-bottomed johnboat, a 7½ horsepower motor, three fishermen and all their gear and mix them up in the center of a sudden severe line squall and you have all the ingredients for tragedy.

Three northeastern region men had been fishing a quiet cove on

Beltzville Lake. Finishing up for the day, they pulled anchor and headed out into the main body of the lake on their way back to their car and trailer, parked about 2½ miles away. Without warning, the freak squall descended over the lake, knocking down trees and power lines and creating three- to four-foot waves on the nearly one thousand-acre lake.

The operator of the boat cut his speed down to stop taking water over the bow, and in doing so, the following waves began pouring over the shallow transom. They had no time to make for either shore, and in any case, the lake was simply too rough to run in the troughs. One extra large wave lifted the bow into the air and flipped the little boat end over end, bow over stern, and dumped men and equipment into the water. All three had been sitting on Type IV buoyant cushions and they were all able to grab them as the boat flipped. They hung on to the overturned craft and to the cushions until another boat was able to reach the floundering trio.

Any boating safety expert will tell you there's no substitute for the jacket type device, *when it's worn*, but here we have a case of a sudden storm that came up so fast that all the fishermen agreed they would not have had time to locate and don life jackets. These fishermen were able to avert certain tragedy because their personal flotation devices were *readily accessible*.

TIME NOW FOR THAT BOATING COURSE?

Way back in June, the Fish Commission mailed out an 80-page "Basic Boating Text" to every registered boat owner in the Commonwealth. At the back of the book was a do-it-yourself exam that could be mailed back to the Commission in exchange for a certificate of completion. Not quite all of our boaters have taken advantage of the home course so far. In the flurry of summer activity a lot of folks probably just set the book aside, meaning to get at it as time allowed. Now that the cold weather is upon us, perhaps now's a good time to get into it?

If you did not receive a copy, they're available from the Fish Commission at no charge.

THE ANGLER'S NOTEBOOK

by Richard F. Williamson

FISH FACT: Fish also have "BO" — but not because they are unclean. They give off a scent that can be detected by other fish. Thus, a bass for example, is able to detect the presence of minnows without actually seeing them, and the minnows become aware that a predator is in their area.

Cleated rubber boots are not 100 percent safe, particularly after they are worn for a season. For maximum safety, boots, waders or wading shoes with felt soles are best in water where the bottom consists of well polished rocks. Footwear with metal cleats are better for wading over mossy, muddy or slimy bottoms.

Heavily dressed streamers and buck-tails should be avoided. Even when wet they will not slim down to the slender proportions of live minnows.

Some rubber bugs sold for bluegill fishing have rubber legs an inch or more in length. They will be more effective if the legs are cut down to about three-quarters of an inch.

Cleaves are key parts of a spinner combination. They are the metal devices on the shaft to which the spinner blades are hung. The best cleaves are the smallest possible that will still let the spinner blade turn without rubbing on the shaft. The larger the cleave, the slower the spinner blade turns.

Very bushy trout dry flies, such as the bivisible patterns, at times will bring strikes from smallmouth bass that ignore larger, more conventional bass bugs.

Greasy dressing is not the way to treat a floating fly line. Instead, use prepared line cleaner, or a bit of paraffin, and dress the line with it occasionally. This will clean the line and at the same time give it a slick surface that will make it easier to cast.

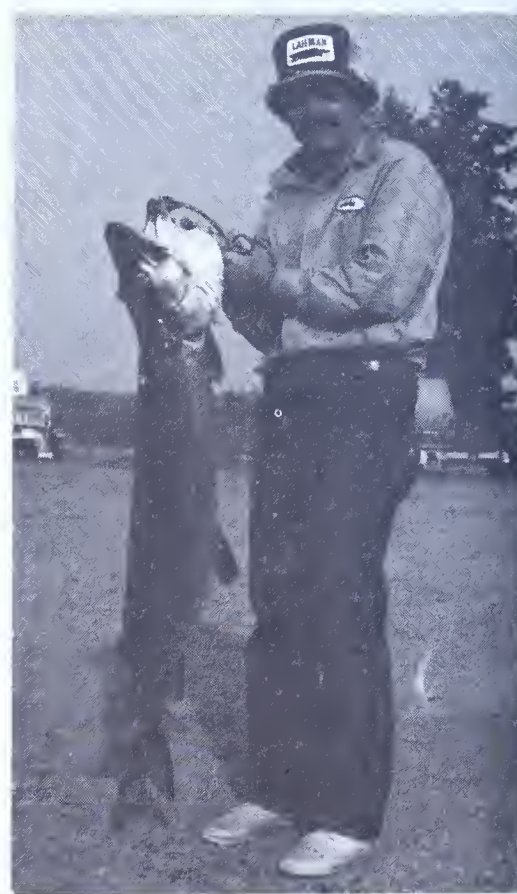
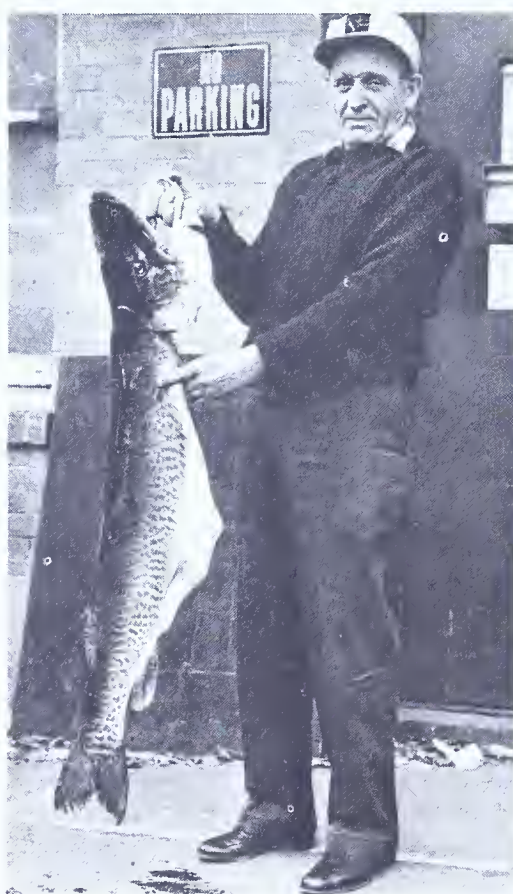
Before retiring your fly rod for the winter, inspect it for chipped varnish, worn windings, broken or roughened guides and loose ferrules. Make necessary repairs now. Don't wait until the new fishing season is just around the corner.

Underwater plugs eight- or ten-inches-long are not too big for musky fishing, particularly in trolling in deep water. Surface lures should also be in king sizes. Large muskies are seldom interested in small lures. Bait fishermen catch muskies on suckers or other bait fish as long as 12 inches.

Swivels on the end of casting lines can ruin the effectiveness of small lures . . . weight is the problem. To solve it use only the snap, eliminating the swivel. Snaps are very light and therefore less likely to cause trouble. Keep in mind, though, that some lures will twist the line if a snap swivel is not used.

To make two fishing lines from one, cut a double-tapered line in half and attach each half to a level line (or other backing) long enough to make the completed line fill the reel spool properly.

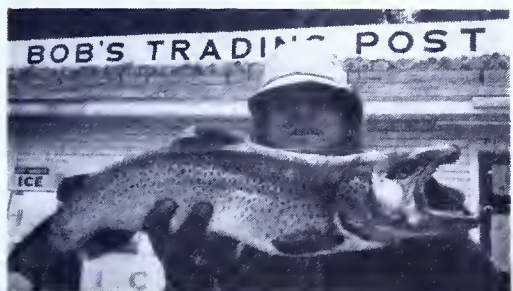
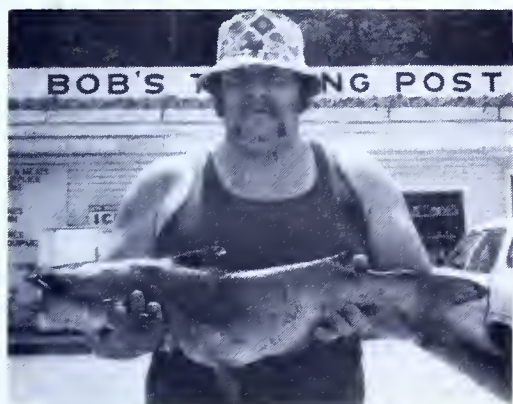
Spoons are killing lures because they are designed to wobble, dart, weave from side to side and make other motions that a live minnow would make in attempting to escape from a predator fish.



It just makes a fella tired looking at that musky catching trio, above, struggling with their prizes! Left to right: Patrick Kelly — 46-inch 28-pounder. Charles Buckwalter — 49 $\frac{1}{4}$ -inch 38-pounder. Ronald Eckner — 51-inch 35-pounder.

SPEEDWELL SNAPPER SORTIE . . . ➡

FROM KINZUA . . .

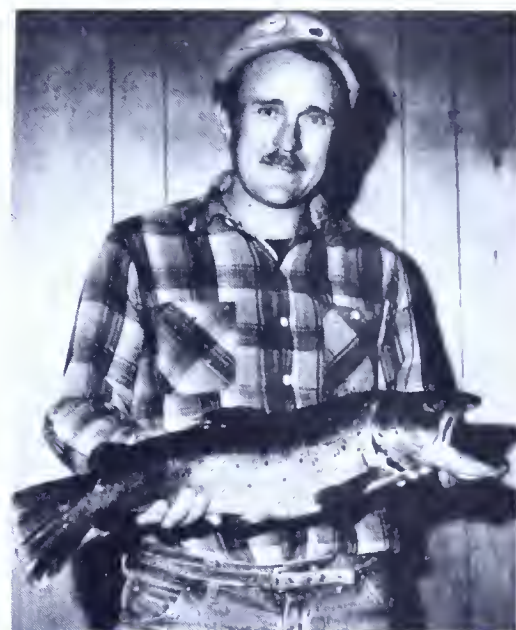


SNAPPING TURTLES, snapper soup, turtleburgers, and a host of other turtle dishes and turtle talk on the *Angler's* pages recently gave Miles Ginder, left, and his buddy Kenneth Helman, right, the "turtle bug." According to both Southeast Regional Supervisor Norman Sickles and Assistant Supervisor Stan Paulakovich, Miles and Ken really went to work on Speedwell Forge Lake's snappers. Back in July, Norm tells us, they dropped into the Regional Office (located on the lake) with ten snappers! Stan tells us that, in a month-and-a-half period, from mid-July through August, they caught a total of 62 adult snappers which weighed, altogether, 547 pounds. Largest was a 23-pound female. Ginder and Helman used plastic milk jugs for floats, baited regular turtle hooks with chicken gizzards, setting them out just before nightfall and pulling them out first thing in the morning. In addition to supplying a real batch of snapper soup, the absence of those turtles will make life easier for Speedwell Forge Lake's duck and fish populations!

◀ ONE OF EACH!

➡ BACK EAST

We were beginning to wonder whether "Bob's Trading Post" was a place where fishermen went to trade their catches with each other to have pictures taken! 'Taint so, they tell us. We've selected that string of photos, left, to give you some idea of what you can expect to catch while fishing Kinzua's waters. From top to bottom: that's Butch Keller with a 30 $\frac{1}{4}$ ' 10 lb. 8 oz. walleye; Thomas Kilhoffer and his 28 $\frac{1}{2}$ ' 9 lb. channel catfish; next is smiling Jim Lippert with a 27 $\frac{3}{4}$ ' 7 $\frac{3}{4}$ lb. brown trout; then, a 47 $\frac{1}{2}$ ' 33 lb. 2 oz. muskellunge caught by A. A. McElhattan, Jr.; and, down at the bottom, Bill Brunner and his northern pike, a husky 40 $\frac{1}{4}$ ' 15 lb. specimen.



Ronald Bowman's 25 $\frac{1}{2}$ ' 6 lb. 6 oz. brown trout was caught down in Carbon Co.

"LEAKY BOOTS"

continued from page 5.



Ralph McCool's musky, above, was 53½ inches, weighed 33½ pounds. Ralph caught it in Crawford County's Sugar Lake.

FROM ACROSS THE SEA —

With reference to Chauncy Lively's interesting article on the French Tricolor, in the May '76 Pennsylvania Angler, I think I am the visitor from France who gave this pattern to Martha Young, although I am neither famous nor French.

I have known the Youngs since the early '30s when I lived in Detroit. I have lived in France in recent years and fish the fine rivers in the Pyrenees.

The origin of the Tricolor (a flag-waving designation, that of the French

national flag) goes back to about 1930. At first it was a palmer-tied attractor with three different colored (hence the "tricolor," as for the flag) hackles. It was first commercialized by the Ragot firm in Loudeac, still as a palmer tie, the red and black hackles a fixed feature, the third either yellow or grey.

Another commercial tyer, Henri Bresson, brought out another version, still palmer-wise, in very small (22 and 24) sizes, as a fly for grayling on the waters of the Rhone watershed. It was this version that I used for some years, during midge season, until I modified it with a white hackle at the bend, and a distinct fore-and-aft design.

Not only has this pattern worked well on the Au Sable in midsummer, but it also got me fish on the Montana spring creeks when no other floaters would do a thing.

I mention all this (which doesn't go back very far, and with which I am quite familiar), to illustrate the way a fly pattern evolves.

GEORGE BEALL
64600 Anglet
France

"STILL OPTIMISTIC"

After giving the thought much consideration, I've decided to write this letter anyway. My point is pollution — the senseless littering of our streams, rivers and highways. At times I feel that all the efforts made by organizations such as TU and so many of the rod and

**MOVING? Send us your
old and new addresses.**

gun clubs and other groups across the state are in vain, but I'm still optimistic.

I enjoy getting out on the streams and trying my luck and just enjoying what God has provided for all of us. But to go to a stream and see what man has put there makes me sick. To see what the so-called sportsman leaves behind him is so sickening that at times I just want to put the old stick away and to say, "the ---- with it all."

Personally, I feel that the litter laws in this state are too light. My suggestion is to up the fines for littering. Hit the slob right where it hurts. And believe me, slob is a very mild word to call them. Make litter fines so high that maybe those creeps will think twice before they leave an empty cigarette pack, beer or soda can or whatever behind them — such as a fine of \$100.00 minimum and \$500.00 maximum with a suspension of their fishing license of five years. This fine should also cover littering along our highways with the exception that there is (*sic*) no maximum or minimum — just a flat \$500.00.

Maybe you and a lot of your readers think I'm a very hard and cold person, but I'm out there every weekend and I'm sick of seeing all of it. I think it's high time the laws get hard and the fines get high, before it's too late for us all.

CHESTER GIENIEC
Kulpsville

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